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INTRODUCTION

1. Scope and purpose of the study:

The following study attempts to present a picture of the Malayāḷam language as it was during its earliest known period. This period, which has been described as the Early Old Malayāḷam period,[1] may be said to begin roughly in the last quarter of the ninth century of the Christian era (which coincides with the third quarter of the first century of the Kērala era known as the Kollam era), and end in the first quarter of the thirteenth century of the Christian era (or in the last quarter of the fourth century of the Kollam era). During this period the speech of Kēraḷa is characterised by a large number of *forward* developments, particularly in the fields of phonology and morphology. By the end of the fourth century of the Kollam era, the developed forms are so numerously represented as to justify the marking of a definite stage in the development of Malayāḷam with the beginning of the fifth century. This study which pertains to the earliest phase of Malayāḷam, therefore, ends with the close of the fourth century of the Kollam era.

1. L. V. Ramaswami Aiyar, in his *Evolution of Malayāḷam Morphology,* marks off the following linguistic periods for Malayāḷam:

(1.) The Beginnings of Mal.—The exact limits are difficult to ascertain. The opinion that the 10th century marks the end of this epoch need not be absolute in view of the fact that Malayāḷam may have developed and popularised its characteristic linguistic features even before the 10th century in the colloquials of the west coast. This development which (I may incidentally observe) need not have been uniform in all areas of Malabar, was perhaps given the sanction of 'dignified' usage only from about the 9th or 10th century.

(2.) Old Malayāḷam—The lower limit may conveniently be fixed as the 16th century. The following subdivisions are more or less conspicuous.

(a) Early Old Malayāḷam (till the 12th or the 13th century).—This was the period when the literary tradition was still dominantly subject to the sway of Tamil conventions. This is the period, par excellence, of the form described as *pāṭṭu* in *Līl.*

(b) Early Maṇipravāḷa period (till the end of the 14th century), marked by the phenomenal influence of Sanskrit in all the various directions pointed out by *Līḷ.*

(c) The campu period (till the 16th century), in which the influence of Sanskrit continued to assert itself though in the sphere of language it was shorn of the bizarre *Saṃskṛtīkṛtabhāṣā* forms of the early maṇipravāḷa period.

(3.) New Malayāḷam (From the 16th century to the present day).

(a) Transitional New Malayāḷam: the period of Eḻuttaśśan.

(b) Early New Malayāḷam—Pūndāṇam, Kēraḷa Varma Vālmīki Rāmāyaṇam, Kōṭṭayattu Tamburāṉ. (16th and 17th centuries).

(c) Middle New Malayāḷam.—The period of Kuñjaṉ, Uṇṇāyi, Rāmapurattu and Kalleṅgulaṅṅare. (18th century) .

(d) Late New Malayāḷam—From Valia Kōyittamburāṉ to the present day. (19th and early 20th century). (*EMM*, pp. 3-4).

2. History of Malayāḷam linguistic studies:

Reviewing the earlier linguistic studies in Malayāḷam, it should be stated here that GUNDERT, the pioneer of modern Malayāḷam linguistic studies, has brought together in his grammar published nearly a century ago, considerable material of value for an understanding of the growth and structure of the Malayāḷam language. Though the main purpose of his grammar is only descriptive, he has, with the scanty material at his disposal, attempted to envisage a few historical perspectives. In more recent times, A. R. Rajaraja VARMA, in his *Kēraḷa-pāṇinīyam*, has given us a fairly sound general picture of the Malayāḷam language both in its historical and descriptive aspects.

The discovery of a considerable body of new material, both inscriptional and textual, during the last three decades has enabled the student of language to tackle the evolution of Malayāḷam speech-forms from stage to stage. Also, the rapid advancement of the linguistic and phonetic sciences has rendered necessary the revaluation and readumbration of some of the views expressed by GUNDERT and 'Kēraḷapāṇini'.

Prof. L. V. Ramaswami AIYAR in his numerous papers, and particularly in his monographs on the Phonology and Morphology of Malayāḷam and in his masterly analysis and evaluation of the linguistic materials in *Līlātilakam* (the fourteenth century Sanskrit tract on Malayāḷam grammar and poetics), has given us studies of the Malayāḷam language which are at once historical and descriptive, using most of the new materials available. Prof. K. GODAVARMA has opened up new vistas in the study of Malayāḷam linguistics by his contribution to the problem of Indo-Aryan loan-words in Malayāḷam,[1a] while the numerous research papers which have been published in recent times on Malayāḷam themes and on related speeches, as well as on problems of Comparative Dravidian, have enabled us to understand the historical evolution and affiliation of the Malayāḷam language from the point of view of modern linguistics.

However, an intensive study of all the dated and definitely datable Malayāḷam inscriptions and texts is still a desideratum. Only by such a study can we put on a strictly chronological basis the changes which Malayāḷam has suffered in the course of its evolution since its separation from the parent speech.

The present study, which is intended to form part of such a scheme, was undertaken with a view to find out the exact state of the Malayāḷam language in its earliest stage to which we have access at present. Since there are no definitely datable texts in the Early Old Malayāḷam period, the study was

1a. See my review of GODAVARMA's work in the *Journal of the American Oriental Society* 70. 197-98.

confined to inscriptions.[1b] An examination of all the available west coast inscriptions revealed that it is only from the ninth century of the Christian era (i.e., from the first century of the Kollam era) that speech-forms which could be described as Malayāḷam (as distinguished from the inscriptional prose of the adjoining Tamil country) begin to appear in the inscriptions. This does not mean, however, that characteristically Malayāḷam forms did not exist in the speech of the west coast people before the ninth century: all that the inscriptions prove is that the dialectal forms had not, apparently, gained such currency as to become acceptable in writing.

The material:

34 inscriptions comprising copper and stone records and containing about 7000 words have been selected for the study. These inscriptions cover the whole of the Early Old Malayāḷam period, that is to say, they cover about four centuries beginning with the last quarter of the thirteenth century.[2] The majority of the inscriptions pertain to temple affairs; but there are three records, viz., the two Kōṭṭayam plates of Sthāṇu Ravi and the Cochin plates of Bhāskara Ravivarman, which contain secular matter of an important nature. The inscriptions as a whole provide a fairly rich variety of linguistic data, though they are by no means enough to write a complete descriptive grammar of Early Old Malayāḷam.

The inscriptions from the southern extreme of Kēraḷa (Nāñcinaṭu, as it is called) have not been included in this study for the following reasons:

(i) Although a student of linguistics will have no hesitation to include Nāñcinaṭu in the Malayāḷam area and describe its speech as Malayāḷam-influenced Tamil, for the purposes of the present study the inscriptions from that area cannot have much evidential value. For, due to its intimate connections with the Tamil culture to the east of the ghats, as a result of the frequent Cōḷa and Pāṇḍya conquests of the area, it is but reasonable to presume that the speech of Nāñcinaṭu was of a much 'purer' nature during the earlier centuries of the Kollam era than at present. (ii) Most of the Nāñcinaṭu inscriptions are in 'good' Tamil prose and are written in the Tamil script. (iii) Even when the Nāñcinaṭu inscriptions are in the Vaṭṭeḻuttu script (in which the Malayāḷam epigraphs are usually written), their language is often 'good' Tamil, which takes away from the genuineness of the Malayāḷam forms like the double nasals (resulting from nasal assimilation) occasionally

1b. I have attempted to evaluate the materials in the inscriptions from the point of view of the fourteenth century Malayāḷam grammar *Līlātilakam*, which forms indeed a good vantage point for the historical study of Old Malayāḷam.

2. Unless otherwise stated, the term century in this study refers to the Christian era.

to be met with in them. (iv) A few inscriptions dated in the Kollam era and belonging to Vīra Ravi Kēraḷa Varmaṉ and other Vēṇāṭu kings do indeed contain several Malayāḷam forms like *ari*. But these cannot also be taken as the genuine local forms, since it is quite possible that the king's agents (who were apparently of northern extraction) drew up the documents in the local dialect, inadvertently introducing their own dialectal forms, and got them inscribed under their supervision. For these reasons the Nāñciṉāṭu inscriptions cannot always be taken as trustworthy specimens of the language of Nāñciṉāṭu during the Early Old Malayāḷam period, and they should not be mixed up with the inscriptions from the rest of the Malayāḷam area.

Since the dated inscriptions pertaining to the first four centuries of the Kollam era are few in number (there are only 12 among the published inscriptions—excluding, of course, the Nāñciṉāṭu inscriptions) I have been compelled to take into consideration a number of undated ones. The selection of these has been made chiefly on the strength of the opinions expressed by scholars regarding their dates. I have not, however, taken such opinions on trust but have examined them carefully, particularly from the linguistic point of view, before selecting the inscriptions. As a result of such examination I have found it necessary to reject several inscriptions as probably belonging to a much later date than their editors have supposed.

In selecting the undated inscriptions (including those which are dated in the regnal years of kings) I have, as far as possible, taken into consideration only those which are well preserved and for which plates have been published. It, has, however, been found necessary to select four inscriptions—one dated in the reign of Kōtai Ravi, two in the reign of Bhāskara Ravivarman and one in the reign of Maṇikaṇṭha Rāmavarman—for which plates are not available. The published readings of these inscriptions appear to be free from any serious errors which would affect their linguistic interpretation. One instance of what appears to be an error in the Chokur inscription of Kōtai Ravi has been pointed out in its proper place.

Since the readings published in *TAS*, Vol. VIII do not appear to be free from errors and since plates are not available to check them up, I have considered it safe to omit those inscriptions altogether with the exception of one which is dated in the Kali era, and which appears to be the oldest inscription from the west coast known so far, dated in a definite era.[3]

The inscriptions have been selected with a view to represent the development of Malayāḷam in the entire Malayāḷam-speaking area.

3. 10:5 of this study. The date portion at the end and the first few lines I was able to check *in situ* when I happened to visit the Tali temple some time ago. But since I had gone there in an unexpected manner I could not take an estampage of the inscription or even prepare a complete eye-copy of it.

Thus the Tirunelli (11: 6), Chokur (10: 4), and the Tiruvaṅgayūr (11: 4) inscriptions represent North Kēraḷa; the Tirupparaṅgōḍu (10: 5) and Muyirikkōḍu (11: 6) inscriptions represent Central Kēraḷa; and the rest represent South Kēraḷa.[4] Though the majority of the inscriptions belong to South Kēraḷa (because of the paucity of published inscriptions from the rest of the Malayāḷam area), it may be noted that the Central and North Kēraḷa records like the Tirunelli plates and the Cochin plates (which are dated in the reign of Bhāskara Ravivarman̠ and can be confidently assigned to the 11th century)[5] contain enough linguistic materials to understand the nature of the speech in their areas.

Thirteen inscriptions represent the earliest century in the development of Malayāḷam as an independent speech, which more or less coincides with the tenth century of the Christian era. Of these, four are definitely dated—three in the Kali era, and one in the Kollam era. The Kaṇḍiyūr inscription (10 : 7) dated in the 123rd year of the God at Kaṇḍiyūr has on very reasonable grounds been assigned to the middle of the 10th century (see *TAS*, I, pp. 290, 292). The Kōṭṭayam plates of Sthāṇu Ravi[6] form the earliest reliable documents which contain characteristically Malayāḷam speech-forms. They represent the state of the west coast speech round about the beginning of the tenth century of the Christian era. The Kōtai Ravi inscriptions come next in point of date.[7] The arguments assigning the Indu Kōdaivarman̠ inscriptions to the middle of the tenth century (see *TAS*, III, p. 162) find ample support from the linguistic standpoint; and so three well-preserved Indu Kōdaivarman̠ inscriptions with plates also find a place in this study.

No inscription from the Malayāḷam area pertaining to the 11th century and dated in any era appears to have been published so far. But there are a number of inscriptions dated in the reign of Bhāskara Ravivarman̠ who has been assigned by competent scholars to the 10th-11th century of the Christian era, chiefly on historical and astronomical grounds. A study of these inscrip-

4. The terms 'North Kēraḷa' etc. are used here more or less in the same sense in which they are used in my paper on Colloquial Malayāḷam *BDCRI* 6. 49-52.

5. See C. R. Sankaran and A. C. Sekhar, "Middle Dravidian Morphology," *BDCRI*, 6. 157 ff.

6. For Sthāṇu Ravi's period of rule, see *TAS* 2. 62, *BRVRI* 8. 125.

7. A. G. Wariar, in a paper on the date of Kōtai Ravi (*BRVRI* 1. 39 ff.) attempts to connect the Taḷi inscription dated in the 17th year of Kōtai Ravi (published on p. 43 of TAS, VIII) with the inscription in the same temple dated in 4030 odd of the Kali era. (No. 10:5 of this study); and he bases his conclusions on the date of the king chiefly on this evidence. The Madras and the Travancore epigraphists, however, do not seem to have considered the possibility of taking the two inscriptions together. But it may be stated that linguistic and palaeographic considerations confirm Wariar's view regarding the period of Kōtai Ravi's rule.

tions from a purely linguistic point of view has corroborated this view.[8] I have therefore selected for this study six Bhāskara Ravivarman inscriptions which fall in the 11th century. An inscription dated in the reign of Ravi Rāma (11 : 7) has been selected to represent the latter half of the 11th century. A Peruneyil inscription (11 : 8) which has been assigned by its editor to the 11th century has also been selected.

There are five dated inscriptions pertaining to the 12th century (Nos. 2, 3, 4, 5, and 6 of this study). Of these No. 5 (the Kollūr Maṭham plates) is a voluminous copper-plate record belonging to the last quarter of the century. The Peruneyil record of Kulaśēkhara Kōyiladhikāri (12 : 1) might very well be taken as belonging to the Kulaśēkhara of the Quilon record (as conjectured by the editor) and assigned to the beginning of the 12th century. Similarly the Mitrānandapuram inscription of Maṇikaṇṭha Rāmavarma can very reasonably be assigned to Kollam 371, in which year the Veḷḷāṇi inscription of Vīra-Rāma Varma (who must be identical with Maṇikaṇṭha Rāmavarma as the editor supposes) is dated. There has been a good deal of controversy regarding the date of the Trivandrum Gōśāla Kṛṣṇa bi-lingual inscription of Gōda Mārttāṇḍa (12 : 8), some scholars ascribing it to the 11th century[9] and others, including K. V. Subrahmanya Aiyār who has edited it in *TAS*, III (pp. 46 ff.), to the close of the 12th century. Primarily for linguistic and palaeographic reasons, I have accepted the latter opinion and included the inscription in the 12th century list.[9a]

To the first quarter of the 13th century belong four inscriptions dated in the closing years of the 4th century of the Kollam era. The Veḷḷalūr inscription of Rāma-Kēraḷa tiruvaḍi has also been included here as belonging to 1214 A.C., as suggested by the editor. These inscriptions have been selected in order (a) to bring the study down to the close of the 4th century of the Kollam era, and (b) to show clearly the beginning of a new stage in the development of the Malayāḷam speech with the commencement of the 13th century of the Christian era.

Seven short inscriptions out of the present list, containing about 600 words, were included in the materials used for a paper ("Middle Dravidian

8. See "Middle Dravidian Morphology", *BDCRI* 6. 157-234.

9. K. R. Pisharoti and A. G. Wariar, "Trivandrum Inscription of Ādityarāma"; *BRVRI* 8. 61 ff.

9a. Since the preparation of this study four years ago the discovery of only one inscription which might fall in the Early Old Malayāḷam period has been announced, so far as I know. (See the Administrative Report of the Travancore Archaeological Department for the year 1946). The inscription has not been published yet, but since apparently it is not dated in any era or in the regnal year of a monarch it is of no importance to the present study which is based entirely on material of known date.

Morphology", *BDCRI*, Vol. VI, No. 4, pp. 157-234) which I published in 1946. They are here re-studied in greater detail from the point of view of the historical development of the Malayāḷam speech. Also some of the doubtful materials in those inscriptions are here re-examined and revaluated. (For instance, the development of the Malayāḷam verb without personal terminations on the strength of the dubious *kāṭṭiccōravellūr Iravi-kaṇṇi*, etc., 11: 3-5).

4. Treatment:

Before exploiting the materials in the inscriptions, I have checked up the published texts with their plates wherever these are available. As a result of this I have found a number of what might be called errors in the published readings. I have also been able to suggest alternative readings for some of the speech-forms in the published texts. The emendations and the significant alternative readings I have incorporated in the text of the inscriptions given as part II in this study, noting the published readings as footnotes. In the actual study of the inscriptions, of course, only the emended readings have been taken into account.

Except in a few cases where no reference was felt necessary, I have given proper references to all the speech-forms discussed in this thesis. The first number within the circular brackets after a speech-form refers to the century to which the inscription belongs, the second to the serial number of the inscriptions, and the third to the line in the inscription. Thus 10: 2-24 means: 10th century, inscr. no. 2, line 24. The meaning and context of speech-forms have been given only in a few cases where these were considered very necessary for the discussion. Wherever context is given, all the speech-forms except the relevant ones are generally put within circular brackets.

Chiefly for the sake of convenience, the three Sthāṇu Ravi inscriptions which belong to the close of the 9th century are included in the 10th century list. But it may also be noted here (as already stated above) that, from a linguistic point of view, they may be taken as representing the nature of the speech of Kēraḷa in the beginning of the 10th century. Again, for the sake of convenience, I have referred to the five short inscriptions in this study pertaining to the first quarter of the 13th century by merely 13th (century). It needs hardly to be pointed out here that the meagre materials in these five inscriptions cannot be taken as fully representative of the state of the west coast speech even during the first quarter of the 13th century.

In a historical grammar of this kind it is hardly necessary for me to point out that phonology and morphology should alone be given prominence, as only these are capable of more precise treatment than syntax and semantics which involve wider questions touching even fields beyond ordinary linguistics. (See under Syntax—Chapter IX.) It is obvious that palaeography is not germane to my thesis. However, in so far as it is auxiliary to

the study of phonology, it is dealt with here as part of the phonology section itself. Likewise, syntax is included in the general section of morphology. It may also be mentioned here that in this thesis the problem of vocabulary, in so far as it deals with the speech-forms that were current in the Early Old Malayāḷam period but which have become obsolescent in the later (particularly modern) period, has not been dealt with, beyond indicating them in regard to the verbal bases.

I have resisted the temptation of comparing the Malayāḷam materials presented in this study with the speech-forms of cognate languages, for the reason that such a comparison does not prove much unless the line of evolution of these languages is thoroughly known from the earliest period in their history. And there is the very real danger that, at a certain stage in their history two languages may have identical forms which have arisen by different processes, in which case the comparison loses all its point and becomes unscientific. Therefore, although studies of Kannaḍa are available for certain (6th to the 10th) centuries, I have not attempted any comparison of the Malayāḷam materials with those of Kannaḍa.

5. *Transliteration:*

The transliteration exhibits only the equivalent of the *written* word. The system of the Royal Asiatic Society has been adopted for the transliteration, with the following modifications:

ń : dental nasal.

ṉ : alveolar nasal.

ṟ : The cerebral (or retroflex) *ṟ* of Tam.-Mal., trilled to a greater extent than the post-alveolar *r* (ற of the Tamil script and റ of the Mal. script). Very probably, the speech-sound represented by this symbol had the value of an alveolar plosive in Early Old Malayāḷam, particularly when it forms part of a conjunct consonant like *ṉṟ* (*ṉḍ*).

ṟṟ : The long alveolar plosive of the Tamil-Malayāḷam group (with or without any 'excrescent' *ṟ*-sound which is usually incorporated in the evolution of literary Tamil). (ற்ற of the Tam. and റ്റ of the Mal. scripts).

ḻ : The retroflex continuant of the Tam.-Mal. group (ழ of the Tam. and ഴ of the Mal. scripts). "A frictionless continuant having an obscure unrounded back-vowel quality. *ḻ* is made by drawing back the whole tongue, and spreading the blade laterally, making it thick, short and blunt, so to speak, so that it approaches the middle of the hard palate. The result is a very retracted liquid

sort of ṟ-sound." (Cf. J. R. FIRTH, "A Short Outline of Tamil Pronunciation." Appendix to ARDEN'S *Tamil Grammar*, p. xvi.)

ɯ : The unrounded (or lip-spread variety of *u* appearing in final position in Tamil and in 'vulgar' colloquials in Malayāḷam.

ə : 'The Mal. representative of Tamil ɯ—a mixed, half closed, or half open vowel.' (For the sake of convenience, I have, generally speaking, used only the symbol *u* in this study to represent these two last-mentioned phonemes. In other words, the so-called -*u* bases are, as a general rule, either ɯ or ə—a distinction which is not relevant while discussing the morphology of Early Old Malayāḷam. I have marked long *e* and long *o* in the examples cited in the body of the thesis for the sake of facilitating proper reading, although the distinction between the long and short varieties of *e* and *o* is not made in the Vaṭṭeḻuttu script in which the inscriptions are written. In quotations in the body of the thesis, I have followed the system of transliteration adopted here.)

[*Note.*—To go into the question of genetic relationship, and still more to discuss the preservation of archaistic features in Malayalam, would transcend the scope of this work. But in several contexts I have made an attempt to cite the opinions of scholars, in so far as they relate to these vital questions, more to draw attention in the light of the materials presented here to the existing views on these undoubtedly fascinating problems, than to discuss them.

It is my pleasant duty to acknowledge here my profound indebtedness to Professor C. R. SANKARAN, Reader in Dravidian Philology and Experimental Phonetics at the Deccan College Research Institute, Poona, for assigning me this subject for my Ph.D. thesis and for guiding me throughout the investigation. To Dr. S. M. KATRE, Director of the Deccan College Research Institute and the Head of the Linguistics Department, I am deeply grateful for all the help and facilities he gave me for my work at the Institute, and particularly for his numerous acts of personal kindness without which I could not have proceeded with my work at different stages. To the librarian of the Deccan College Research Institute and his staff I am thankful for all the help they so readily rendered me in my work.

The late Professor L. V. RAMASWAMI AIYAR warmly encouraged me in my work. The extent of my indebtedness to his very extensive researches in the Dravidian field will be apparent from the following pages. I may say without any exaggeration that this study of mine is almost in the nature of

a tribute to his work, most of whose conclusions about the evolution of the characteristic features of the Malayāḷam language are confirmed by the analysis of the inscriptional materials embodied in this thesis.

Dr. Z. S. Harris, Professor of Linguistics and Chairman of the Linguistics Department, University of Pennsylvania, Philadelphia, U.S.A., with whom I had the honour of working for two years while I was a Lecturer in Dravidian Linguistics at the University of Pennsylvania, was kind enough to read through this thesis and make some helpful suggestions. It is at his suggestion, for instance, that I have attempted to give syntactic definitions of word categories. I am very happy to record here my indebtedness to Professor Harris. I take this opportunity of recording also my gratitude to Dr. W. Norman Brown, Professor of Sanskrit and Chairman of the South Asia Regional Studies Department of the University of Pennsylvania, at whose invitation I went to America in September 1948. I cannot sufficiently thank Professors Brown and Harris for all the wonderful opportunities they gave me to study American Linguistic methods both at the University of Pennsylvania and at the Linguistic Institute, University of Michigan, Ann Arbor, Michigan. I am very grateful also to the American Council of Learned Societies for giving me a Fellowship which enabled me to study at the Linguistic Institute, University of Michigan, in the summer of 1950.]

CHRONOLOGICAL LIST OF THE INSCRIPTIONS SELECTED FOR THIS STUDY

(The asterisk after the Index No. indicates that plate is not available.)

10th Century:

Index No.	Name of the Inscr.	Source.	Date.
1.	Kōṭṭayam Plate of Sthāṇu Ravi No. I ..	TAS, II, pp. 67-68.	Close of the ninth century.
2.	Kōṭṭayam Plate of Sthāṇu Ravi No. II ..	TAS, II, pp. 80-82.	do.
3.	Inscription of Sthāṇu Ravi No. III ..	TAS, II, pp. 85-86.	do.
4.*	Inscription on a slab set up in front of the Chokur temple in Puttur amśom, Calicut taluk, Malabar District.	SII, VII, pp. 72-73.	15th year of Kōtai Iravi: c. 925 A.C.
5.*	Inscr. on a stone in the vātalmāṭam of the Śiva temple at Taḷi (Cochin State) ..	TAS, VIII, pp. 44-45.	Kali 4030 odd: c. 930 A.C.
6.	Inscr. on a slab from Tiruppuraṅgōḍu in the collector's bungalow at Calicut ..	SII, V, pp. 337-8.	27th year of the reign of Kōtai Iravi: c. 937 A.C.
7.	Kaṇḍiyūr Inscr. of the 123rd year of the God at Kaṇḍiyūr ..	TAS, I, pp. 293-4.	c. 946 A.C.
8.	Kaviyūr Inscr. of 4051 of Kali era ..	TAS, V, p. 7.	Kali 4051: A.C. 950.
9.	Kaviyūr Inscr. of 4052 of Kali era ..	TAS, V, p. 6.	Kali 4052: A.C. 951.
10.	Tirumūḻikkaḷam Inscr. of Indu Kōdai: 6th year ..	TAS, III, pp. 190-91.	c. 961 A.C.
11.	Tirukkākkarai Inscr. of Indu Kōdai: 10th year ..	TAS, III, pp. 170-71.	c. 965 A.C.
12.	Tirukkākkarai Inscr. of Indu Kōdai: 16th year ..	TAS, III, pp. 166-67	c. 971 A.C.
13.	Māmbaḷḷi Plate of Śrīvallabhaṉ Kōdai ..	TAS, IV, pp. 9-10.	Kollam 149: A.C. 974.

11th Century:

Index No.	Name of the Inscr.	Source.	Date.
1.*	Tirukkaḍittāṉam Inscr. of Bhāskara Ravivarman — 26th year of the reign ..	TAS, V, p. 179.	c. 1004 A.C.
2.	Tirukkaḍittāṉam Inscr. No. 4 — 26th year (of Bhaskara Ravi ?) ..	TAS, II, p. 41.	c. 1004 A.C.
3.	Peruṅeyil Inscr. of Bhāskara Ravivarmaṉ — 33rd year ..	TAS, II, p. 44.	c. 1011 AC.
4.*	Tiruvaṅgayūr Inscr. of Bhāskara Ravivarmaṉ — 35th odd year ..	SII, VII, p. 75.	c. 1015 A.C.
5.	Cochin Plates of Bhāskara Ravivarmaṉ — 38th year ..	EI, III, pp. 66ff.	c. 1016 A.C.
6.	A Second Plate of Bhāskara Ravivarmaṉ found at Tiruṅelli—43rd year ..	EI, XVI, pp. 343-4.	c. 1021 A.C.
7.	Tirukkaḍittāṉam record of Ravi Rāma ..	TAS, V, pp. 174-5.	Latter half of the 11th cent.
8.	Peruṅeyil Inscr. of the 11th century ..	TAS, V, pp. 35-6.	do.

12th Century :

Index No.	Name of the Inscr.	Source.	Date.
1.	Peruṅeyil Record of Kulaśēkhara Kōyil-adhikāri ..	TAS, V, pp. 38-40.	Early twelfth century.
2.*	Quilon Inscr. of Kollam 278 ..	TAS, V, pp. 44-46.	1103 A.C.
3.	Tiruvaṭṭār Inscr. of Vīra Udayamārttāṇḍa Varmaṉ ..	TAS, VII, p. 117.	Kollam 348 : 1174 A.C.
4.	Kiḻḻiyūr Record of Vīra Udayamārttāṇḍa-varmaṉ ..	TAS, VII, p. 25.	Kollam 354 : 1179 A.C.
5.	Kollūr — maṭham plates of Udaya-mārttāṇḍavarmaṉ ..	TAS, IV, pp. 46-65.	Kollam 364 : 1189 A.C.
6.	Veḷḷāṇi Inscr. of Vīra Rāmavarmaṉ ..	TAS, III, pp. 35-36.	Kollam 371 : 1196 A.C.
7.*	Mitrānandapuram Inscr. of Maṇikaṇṭha Rāmavarmaṉ ..	TAS, III, pp. 28-29.	c. Kollam 371 : 1196 A.C.
8.	Trivandrum Inscr. of Kōdai Mārttāṇḍa ..	TAS, III, pp. 50-51.	c. Kollam 371 : 1196 A.C.

13th Century :

1.	Trivandrum Inscr. of Rāmaṉ-Kēraḷavar-maṉ ..	TAS, IV, pp. 67-68.	Kollam 384 : 1209 A.C.
2.	Veḷḷalūr Inscr. of Rāmaṅ-Kēraḷavarmaṉ ..	TAS, IV, p. 71.	c. Kollam 389 : 1214 A.C.
3.	Kaḍinaṅguḷam Inscr. of Rāmaṉ-Kēraḷa-varmaṉ ..	TAS, IV, p. 70.	Kollam 390 : 1215 A.C.
4.	Kaṇḍiyūr Inscr. of Ravi-Kēraḷavarmaṉ ..	TAS, I, pp. 290-91.	Kollam 393 : 1215 A.C.
5.	Tiruvallam Inscr. of Vīra Kēraḷavarmaṉ ..	TAS, III, p. 40.	Kollam 399 : A.C. 1224.

I

PHONOLOGY

CHAPTER I

ORTHOGRAPHY

A. The Script of the Inscriptions:

The early inscriptions of Kērala are generally written in the Vaṭṭeḻuttu characters. This script was also commonly used in most of the adjoining Pāṇḍyan kingdom until about the eleventh century of the Christian era. The inscriptions studied here are all in Vaṭṭeḻuttu, except for one which is in the Tamil script. Almost all the inscriptions contain a few Grantha letters which are used when exact representation of non-Dravidian phonemes is aimed at.

The origin of the Vaṭṭeḻuttu characters is not definitely known. According to BURNELL it is of Phonecian and Aramic origin.[1] BUHLER thinks it to be a 'cursive script of Tamil'.[2] In the opinion of Gopinatha RAO, like all the other alphabets of India, it is derived from the 'Brāhmi variety of the Aśokan script.'[3]

In its earliest form known to us (which is from eighth century Pāṇḍyan documents) the Vaṭṭeḻuttu script is fully evolved and the difference between similar letters[4] *p* and *v; ṅ* and *lu* is clearly shown. "A few centuries later carelessness is exhibited to such an extent that it becomes difficult to say if a letter is *k* or *c, ṅ* or *lu, p* or *v,* and so on. In most recent times, the seventeenth and eighteenth centuries, the difficulty in reading is much more heightened by writing letters *p, v, y, n* and sometimes *l* also, exactly alike, so that if a word like *palavakaiyāṉa* is written in the alphabet of this period, it could be read as *vava-vakaiyāṉa, vava-vakaivāva,* and so on in no less than 24 ways."[5] With the Cōḷa conquest in the tenth century the Vaṭṭeḻuttu

1. Cf. *South Indian Palaeography,* p. 51.
2. Cf. *Indian Palaeography,* p. 75 (Appendix to *IA,* Vol. 32).
3. Cf. *TAS* 1. 284.
4. Here the symbols (letters) denoting speech-sounds are dealt with, orthography being only such a subject. It is elementary knowledge that letters and spoken sounds should not be confused, keeping ever in mind that the domain of linguistics is only the spoken sounds. Cf. BLOOMFIELD, *Linguistic Aspects of Science* (Chicago, 1939), pp. 6-8.
5. *TAS* 1. 283.

script was displaced in the Pāṇḍyan country by the Tamil script. In the insulated Malaiṅāṭu (Kērala), however, it continued as late as the middle of the 18th century, and even here it was finally supplanted by the Ārya-eḻuttu (the modern Malayāḷam script)[6]

The phenomenal increase in the popularity of Sanskritic studies in Kēraḷa during the Old Malayāḷam period (as evidenced by the Old Malayāḷam literary compositions like *Kauṭalīyam bhāṣā, Uṇṇunīlisandēśam,* etc.) seems to have led to the adaptation of the Grantha symbols for the exact representation of Indo-Aryan phonemes in literary writing. The Grantha portion of the Trivandrum inscription of Kōtai-Mārttāṇḍa belonging to the end of the twelfth century (*TAS* 1. 50)[7] provides a good sample of the Grantha writing as it was prevalent in the west coast during the Early Old Mal. period. "It is worth noting that many of the letters in the modern Malayāḷam bears close resemblance to the Grantha of the fourth century of the Kollam era rather than to the Vaṭṭeḻuttu of the same period—a fact that may lead to the inference that such letters are developments of the corresponding Grantha symbols."[8]

The Vaṭṭeḻuttu, like the Tamil script, has no symbols for the voiced variety of the consonants. The scribe, therefore, makes use of Grantha symbols when he aims at exact representation of the non-Dravidian phonemes, as in *svasti, śrī, Sapīr-Īśo, pañcamahāśabdam,* etc. Short and long *e* and *o* are not distinguished and punctuation marks are rarely used. Numerals are sometimes written in figures, and a symbol for *mēṟpaṭi* 'above-mentioned' is often made use of. The Kōṭṭayam Plates of Sthāṇu Ravi[9] contain some writing, apparently the signatures of the donor and his officers, in what appears to be three different non-Indian scripts. In one copper-plate inscription belonging to the 11th century (No. 6) the Nāgari script is used to write *ōm namō Nārāyaṇāya namaḥ.*[10]

B. *Orthographic Errors and Peculiarities :*

Most of the inscriptions studied here contain scribal errors: seldom are they written so well and carefully as to be free from errors. The errors may be broadly divided into two groups: (1) errors of spelling, and (2)

6. ib. p. 286.
7. 12th: No. 8 of this study.
8. *TAS* 3. 49.
9. 10th: No. 2 of this study.
10. As a detailed discussion relating to questions dealing with palaeography and orthography are not relevant in a study like this which is devoted purely to the linguistics of Early Old Malayāḷam, only a brief reference is made here to both palaeography and orthography.

errors arising from omissions. A list of what may be considered as purely mistakes of spelling is given in Part II (The Text of the Inscriptions). Omissions are noted in the texts of the inscriptions with an asterisk mark, in accordance with the usual practice. Instances of 'needless' doubling and lack of doubling where the usual practice is to write long consonants are pointed out under sandhi.

The distinguishing criterion helpful towards the determination of (what might be called) an orthographic error would be *what might not be called a phonological feature.* A phonological feature could be defined as follows: The consistent recurrence of one or a group of substituted phonemes in more than one speech form, the substitution becoming a permanent feature of the language at a later period in its history. For instance, the substituted *a* for *ai* is a phonological feature, for this substitution occurs regularly, not in one or two isolated instances but in several forms like *amacc-, aṭakkā, kaḻaññu, purayiṭam, paṟa, etc.*

In several instances an *y* is written after *i, e,* and *ai.* This is probably indicative of a palatal tone-colour to these phonemes. Exs. *paḷḷiyārēy ārāñtu* (10: 1-20), *pūmiykku* (10: 2-1), *vaiyppāṉ* (12: 5-46). (See under *y* in "Phonological Features".)

ai the base for 'five' is written also as *ay.* Ex. *aiyāmāṇṭu* (10: 11-12), *ayyāmāṇṭu* (10: 12-1).

CHAPTER II

The Phonemes of Early Old Malayalam

The following are the phonemic units of Early Old Malayāḷam as represented in the inscriptions studied here :

a, ā, i, ī, u, ū, e, ē, o, ō, (ə, ɯ),[1] *ai,* (*au*)[2]
k, ṅ, c, ñ, ṭ, ṇ, t, ṅ, p, m, y, r, l, ḷ, v, l̤, ṟ, ṉ.

As in Old Tamil (cf. TE, sūtra 1) it is not unlikely that Early Old Malayāḷam had only thirty distinct phonemic units (12 vowels and 18 consonants). However, the glaring instance viz. *ṅaṅdāviḷakku* in a 10th century inscription (No. 4-45), where there is scriptorial representation of *d in* Grantha character in the place of the usual *t*, might lead one to assume the possibility of the existence of the voiced varieties of the plosives also, at least as phonemic variants.[3]

In initial positions the following phonemes alone occur in native words :

1. The correlative relationship between these two phonemic units on a strictly quantitative basis is a problem for the modern experimental phonetician, as Professor C. R. Sankaran suggests. In this connection I may refer to his paper "An Introduction to the study of Old Tamil Phonemics," *BDCRI* 8, where he discusses the phonemic status of the so-called *Kuṟṟiyal ukaram* and *kuṟṟiyal ikaram*. See also Sankaran's monograph *Phonemics of Old Tamil* p. 39 ff. (Deccan College Monograph Series: 7; Poona, 1951); and L. V. R. Aiyar, "The Malayāḷam representative of the Tamil *kurrugaram*," *QJMS* 29, No. 3. Sankaran's work is intended to be yet another challenge (from the point of view of Phonemics) to the usual prejudice that "facts themselves can and should yield scientific knowledge without free conceptual construction" (Einstein); cf. C. R. Sankaran, "Contribution to the Study of Speech Structure," *BDCRI* 12.

2. Though *au* is not met with in the inscription it is given here for the sake of completeness, since Early Old Malayāḷam possessed it (cf. *PMP*, I).

3. The emergence of different phonemic variants and even different types of phonemes in various contexts of situation is a problem at the meeting point of Experimental Phonetics and Phonemics at the highest levels. A detailed study of wave-forms with an accurate statistical analysis would decide the issue on a quantitative basis. (I owe this suggestion to C. R. Sankaran). Phonemes are usually defined as "distinctive classes of speech-sounds". Likewise it is assumed that "all phones which are identifiable as members of a phoneme are its allophones". (See Ernst Pulgram, *Word* 7. 15). However, a phoneme may be defined with Sankaran as a *class of similar classes*. (Cf. C. R. Sankaran, "Contribution to the Study of Speech Structure", *BDCRI* 12; also p. 21 of his *Phonemics of Old Tamil*.)

a, ā, i, ī, u, ū, e, ē, o, ō, ai.[4]
k, c, ñ, t, ń, p, m, y, v.[5]

In final positions all vowels except short *e* and *o* (?) (and *au*) occur. The absolute consonantal finals are *ṇ, m, y, r, l, ḻ, ḷ, ṉ.*[6]

It is noteworthy that the fourteenth century Malayāḷam grammar *Līlātilakam* (III, 1, comm.) expressly states that *ai* does not occur in final positions and that the form *āṉai* is Tamil (*pāṇḍyabhāṣā*). The inscriptions show that forms with final *ai* were the rule until the twelfth century and that it was only by the close of the Early Old Malayāḷam period that the *a*-forms began to make their appearance in writing (see under Phonological Features).

By the close of the Early Old Malayāḷam period forms with absolute consonantal finals appear to have become less frequent as reflected in the instances *peṇṇu* (11: 8-5) and *ńellu* (12: 5-198) embodying the enunciative *u* (ə). *Līl.* expressly refers to this practice in the commentaries to sūtrās 4 and 12 as well as in sūtra 24 of the third *śilpa.*

4. cf. *L*, III, 1; *GL*, p. 61; *PMP*, I.
5. cf. *L*, III, 7; *GL*, p. 68; *PMP*, I.
6. cf. *L*, III, 1 and 13 (comm.); *GL*, pp. 60 and 70; *PMP*, I.

CHAPTER III

PHONOLOGICAL FEATURES

The following are the important phonological features of Early Old Malayāḷam :—[1]

VOWELS

a

a > *i* :

The change[2] of *a* to *i* in forms like *koṭuppitu* is represented in the 10th century inscriptions. The frequency of occurrence[3] of this phenomenon increases in the later inscriptions. These *i*-forms " correspond in structure to colloquial Tamil forms like *uṇpitu, uṟaṅkuvitu* mentioned by the commentarian of the Middle Tamil grammar *Vīracōḻiyam* (*Kriyā*, II), and *vaiccitu* (SII, III, p. 233)."[1]

10th: *aḷippitāka* (6-96), *vaippitāka* (6-97), *celvitu* (12-7), *koṭuppitu* (13-11), (*koṭuppatu*, 5-16), *paṭuvitu* (13-17), (*paṭuvatu*, 5-18[2]).
IA : *tiruvārātiṉai* (11-6[2]), *Kulacēkarapaṭṭiṉattu* (12-6).

11th: *āvitu* (1-2), *ceyvitu* (6-12), *koḷvitu* (6-13), *koṭṭuvitu* (7-2), (*koṭṭuvatu*, 7-2).

12th: *koṭupitu* (5-41), *iviṟṟiṉṉu* (5-54[2]), *oḷḷitu* (5-122), *āvitu* (6-1), *varuvitu* (6-5), *ippērppaṭṭitu* (6-6), *celuttuvitu* (6-6).

13th: *varuvitu* (5-7).

1. Most of the features of Early Old Malayāḷam phonology were current in Middle Tamil colloquials as attested by inscriptional evidences. For a detailed reference to these common features, see *PMP*. To facilitate reference to the *PMP* I have in the main followed its arrangement. All the unacknowledged quotations in this section are from the *PMP*.

2. Comment is needless on the sense of the term 'change' adopted here following the ordinary usage. In like manner the symbols > < are used in the usual sense. But the rigour of a more scientific methodology would demand only statements like "the forms with *i* correspond to forms with *a*" etc; and the time-honoured symbols > < are used where really correspondence is implied. Cf. A. W. DEGROOT, "Structural linguistics and Phonetic Law," *Archives Néerlandaises de Phonétique Expérimentale*, 17. 71-106.

3. The corresponding unchanged forms are given in brackets. The first number in circular brackets is the serial number of the inscription while the second is the number of the line wherein the form under reference occurs. The raised number indicates the frequency of occurrence of the form.

a > *e* :

13th : *keṭṭi* (2-2) (cf. Tamil *kaṭṭ-*).

IA loans and adaptations with initial voiced plosives sometimes show *e* in the stead of *a* :[4]

10th : *peli* (14-6, < Skt. *bali*).
12th: *teṇṭam* (12-5-273[2], < Skt. *daṇḍa*) (cf. *taṇṭikkoṇṭu*, 8-28).
13th : *tecami* (3-2, < Skt. *daśami*).

It may be noted here that the form (verbal base) *peṭ-* (< *paṭ-*), which is met with in the texts from the time of *Uṇṇunīlisandēśam*, is absent in the inscriptions which have only *paṭ-* throughout.

ā

ā > *a* :

11th: *aṟivar* (6-24) (cf. *aṟivār*, 10th: 12-6).
12th: *tirukkōyilkkal* (3-2), *cērikkal* (2-61).
(cf. *tirukkōyilkkāl*, 10th: 3-2).

The seventh case post-position *kāl* (with the long *ā*) is met with in the 10th century, but in the 12th and 13th centuries only *-kal* (with the short *a*) is found.

It is noteworthy that the shortening of the final *ā* of *aṭaikkā* (< *aṭaikkāy*) is not met with in the inscriptions. The long *ā*, in fruit-names was presumably preserved till the end of the Early Old Malayāḷam period.

i

i > *e* (ə):

The change of *i* to *e* in bases in which *i* is immediately followed by a short consonant and an open vowel is a phonological change common to all south Dravidian languages. The inscriptions show the change in the form *eṭam* (10th: 2-36[2]) (cf. *iṭam*, 10th 2-33).

In *iruṅṅaṭattu* (12th: 2-36; 13th: 2-1) the vowel sign for *e* is absent which perhaps shows that the word was pronounced with an ə *iruṅṅ* ə *ṭattu*.

i > *u*:

10th: *IA* : *paruṭai* (13-4) (cf. *pariṭai*, 11th: 2-6; < Skt. *pariṣat*).

11th: *ṅāṭuvāḻuṅṅa* (7-3) (cf. *vāḻinṟa*, 7-1).

12th: *arutāte* (5-4) (cf. Tam. *aritu*).

4. cf. K. Godavarma, Indo-Aryan Loan-words in Malayāḷam, 25 ff.

In the above forms the weak-accented position may have led to the change of *i* to *u* (through centralised vowel stages) as L. V. R. AIYAR thinks (cf. *PMP*, II). The change of *i* to *u* in the Malayāḷam present tense ending *uńńa* < *uṉṟa* < *iṉṟa* is represented in one instance, viz. *ńāṭuvāḷuńńa* in an 11th century inscription. "The change here may have been accelerated by 'attraction' of the final *u* of Malayāḷam forms without personal endings." (*PMP*, II).

u

u > *o*:

"*u* changes to *o* when in initial (radical) syllables *u* is followed in the next syllable by a short consonant and a more open vowel or diphthong. This may be compared to the change of *i* to *e* in similar circumstances. This change also is colloquial in Tamil and in Malayāḷam while it has been embodied in literary instances in the other south Dravidian speeches." The *u*- and *o*-forms appear side by side in the inscription and it is noteworthy that the *o*-forms are more numerously represented in the inscription from south Kēraḷa.

10th : *oḷḷa* (2-43^{3}) (*uḷḷa*, 1-21), *oṇṭāyil* (2-46), (*uṇṭākil*, 2-47), *oḷḷatu* (7-41).
11th : *uḷḷa* (3-3^{3}).
12th : *oḷḷa* (1-41^{5}), (*uḷḷa*, 5-103).
13th : *oḷḷa* (1-7).

u > *i*:

In unaccented positions *u* is often changed to *i*.

10th : *paṭiññāyiṟu* (2-12) (cf. Tam. *paṭuññāyiṟu*), *celitt-* (11-14) (*celutt-*, 11-16).

The change of the sixth case ending -*uṭai* (< -*uṭaiya*) into -*iṭe* through the weakening of *u* into *i* is not met with in the inscriptions. It may, however, be noted here that *Kauṭalīyam bhāṣā*, belonging to the Early Old Malayāḷam period, has *iṭe*-forms. *iṭe* is also mentioned in *Līlātilakam* (II, 11, comm.). "This weakening marks the first stage in the process whereby the sound is ultimately slurred over and the meeting of final person-denoting -*ṉ* (or the *ṉ* of the augment -*iṉ*-) is brought about, and *ṭ* of *ṭe* is converted to the alveolar *ṟ* (*d*) in these contexts."

ɯ *and* ə

In Early Old Malayāḷam as in Tamil, the final *u* of forms like *iraṇṭu*, when they formed the first part of compounds like *iraṇṭu-viḷakku* (10th : 4-39) appears to have been enunciated as a *kuṟṟiyal-ukaram*. But before consonants and pauses the *u* was probably opened out to ə (as in modern Malayāḷam), as is evidenced by the example *taṇṭam vaiccə cellutta-k-kaṭavar*

(10 : 1-17), the ə being represented by the absence of vowel mark for the final letter of *vaicc-*. [Cf. *PMP*, II; Cf. also *nūṟṟu* (ə) *kaḷañcu* (10: 12-4)).]

e

e > *i* :

12th : *cilavu* (3-1²) (*celavu*, 10th: 12-2).

The change of *e* to *i* in this form may be due to the 'contamination' of the form *cila* 'some' as AIYAR suggests.

o > *u* :

10th : *kuṭuttāṉ* (1-6)[7] (*koṭuppitu*, 13-11³), *tuṭaṅki* (3-5) (cf. Tamil *toṭaṅki*).

ai (*ay*)

ai > *a* :

The reduction of *ai* to *a* is one of the most important features of the evolution of Malayāḷam phonology, and it appears to have started quite early in the history of the speech of Kēraḷa. In the earliest inscriptions, forms with and without the diphthong appear side by side. Till the 12th century only forms with medial *ai* are affected by this change, and it is only from the middle of the 12th century that forms with final *a* < *ai* are met with. It may, therefore, be stated that the change of *ai* > *a* started in medial positions and then gradually spread to final positions also (cf. *PMP*, II).

10th : *medial ai* > *a* : *amacc-* (8-1²) (*amaicc-*, 8-2⁴), *ampatt-* (*aympatt-*, 9-1).

11th : *medial ai* > *a*: *Naṉṟuḷaṅāṭu* (7-1³) (cf. *Naṉṟuḷaiṅāṭu*), *amaccu* (4-2). (*amaicc-*, 6-5⁴), *kaḷaññu* (7-3).

12th: *medial ai* > *a*: *purayiṭam*, (5-39³) (*puraiyiṭam*, 5-35²), *aṭakkā* (5-171) (*aṭaikkā*, 5-169), *irupattañcu* (5-171) (*irupattaiñcu* 5-169), *amañca* (6-1).

Final ai > *a* : *para* (5. Out of about 200 times this word is used in the inscription only in a few instances is the diphthong *ai* written.) *Ciṟṟārraṅkarayil* (5-22) (*Ciṟṟāṟraṅkaraiyil*, 5-67), *maṭayāl* (5-36) (*maṭaiyāl*, 5-66), *āṉṭuvarayum* (5-51²), *veṟṟila* (5-59) (*veṟṟilai*, 5-44²), *ella* (6-7) (10th: *ellai*, 2-12).

13th : *medial ai* > *a* : *purayiṭam* (5-7).

final ai > *a* : *māla* (5-7) (*mālai*, 5-4).

The changes of the accusative termination *-ai* to *-e* and the genitive *-uṭaiya* to *uṭe* (*uṭaiya* > *uṭai* > *uṭe*, or *uṭaiya* > *uṭaya* > *uṭe*) are not reflected in the inscriptions.

It is noteworthy that the change of *ai* to *a* in medial positions and to *e* in final positions, as well as the change of the second case ending *ai* to *e* are represented in Middle Tamil inscriptional instances (cf. *PMP*, II).

āy (*āi*)

āy > *ā*:

The reduction of *āy* to *a* in fruit names, as in modern Malayāḷam *aṭakka* (< *aṭaikkāy*), started in the Early Old Malayāḷam period as testified by the 12th century forms like *aṭaikkā* (5-169), *paḻukkā* (5-59).

ārāññu (10th: 2-47, < *ārāṅtu*, 1-20, obviously < Tamil *ārāyṅtu*) also represents the reduction of *āy*.

ey (*ei*)

"Though *ei* does not find a place in the alphabet, the diphthongal value is often heard in speech in the evaluation of *ey*." In final positions *ey* (or *ei*) fell together with *ai* and suffered the change to *a* or to *e*. Exs. 12th: *eṉṉa* (5-58^2) (< *eṉṉaiy* (10th: 10-7^2) < *eḷ-ṅey*), *iruṅāḻicca* (5-40) < *iruṅāḻi-c-ceytu* (11th: 7-2).

The *y* of *ey* is sometimes elided (and the *e* is, perhaps, compensatorily lengthened) as in *cēta* (12th: 2-63), *cēvatu* (12th: 5-4).

CONSONANTS

k

k > *y*:

10th: *Kārttiyai* (7-15). This may have been the result of spirantization of the *k* of *Kārttikai* (< Skt. *kṛttikā*)[5] which is a common enough phenomenon in the colloquials of the Tam.-Mal. group.

k is often elided in *avarkaḷ*: 10th: *avaraḷ* (9-2) (cf. *avarkaḷ*, 6-102); 11th: 1-5, etc.; 12th: 5-44, etc.

ṅk

ṅk > *ṅṅ*:

The change of *ṅk* to *ṅṅ* by the process of nasal assimilation is "one of the earliest sets of changes in the evolution of Malayāḷam... and has been more active in Malayāḷam than the similar assimilative changes in the other consonant groups". The tendency to change *ṅk* to *ṅṅ* had become

5. Cf. GRAY, *Foundations of Language*, p. 52.

so universal and deep-rooted in the Early Old Malayāḷam period that many common words (including IA loans) like *tiṅkaḷ* and *Caṅkaran*, which are used today without nasal assimilation, often appear in the inscriptions with the change. The change is not confined to the old internal group *ṅk* but affects also some instances of the group *ṅk* formed as a result of the meeting of different nasal consonants with *k*.

10th: *taṅṅaḷ* (2-46) (*taṅkaḷ*, 2-47), *uḷḷoṭuṅṅa* (12-4) (*uḷḷoṭuṅka*, 11th: 7-1), *Muruṅṅaiyūr* (13-22).

IA: *Maṅṅalattu* (9-1) (*Maṅkalattu*, 9-2), *Caṅṅaraṉ* (13-22) (*Caṅkaran*, 3-2).

11th: *pāṭutāṅṅ-* (7-3) (10th: *pāṭutāṅk-* 13-11), *tuṭaṅṅi* (8-2) (10th: *tuṭaṅki*, 3-5), *tāṅṅaḷ* (8-6), *Maṉaṅṅāṭṭu* (6-23).

IA: *Kūḷamaṅṅalattu* (3-5).

12th: *uṉaṅṅi* (3-2), *Neṭuṅṅoṭṭ-* (5-6[2]) (*Ceṅkoṭṭu*, 5-7) *tiṅṅaḷ* (5-40[2]) (*tiṅkaḷ*, 5-48), *araṅṅattu* (5-45[2]), *Ciṟṟāṟṟaṅṅarai* (5-200[2]) (*Ciṟṟāṟṟaṅkarai*, 5-206). *kuḷaṅṅarai* (5-35; < *kuḷam-karai*), *purayiṭaṅṅaḷ* (5-249; < *puraiyiṭam-kaḷ*), *kaṅṅāṉiccu* (5-20[12]) (*kaṉṉāṉiccu*, 5-185 < *kaṉkāṉi-*).

IA: *Kāpālimaṅṅalattu* (1-39[6]), *Ciṅṅam* (2-8) (10th: *Ciṅkattuḷ*, 12-1) *Paṅṅuṉi*, (5-33) (*Paṅkuṉi*, 5- < Pkt. *phagguṇi* < *phalgunī*).

13th: *taṅṅaḷ* (2-1), *Maraṅṅāṭṭu* (4-13), *Teṅṅaṅāṭu* (5-2), (cf. *tiṉkaḷ*, 5-4), *kuḷaṅṅaraikkal* (2-3).

IA: *-maṅṅalattu* (4-5).

c

c > *t*:

The change of *c* to *t* in *paritu* (10th: 1-22) (cf. *paricu* (10: 3-4) seems to be a false restoration on the analogy of *vaiccu* < *vaittu*.

c (*ś*) > *y*:

10th: *Palaṅkāyiṉōṭu* (3-3), *Māyi* (12-2) (< *māci* < Skt. *māgha*), *ariy* (5-9) (< *arici*).

IA: *Keyavaṉ* (6-5 < *Keśavan*).

12th: *ariyikku* (4-25), *vāyappaṭi* (5-279; < *vācal-*).

IA: *vayam* (4-29; < *vaśa*), *kalaiyyattiṉṉu* (5-52; < *kalaśa*).

The dropping of the final *-c* in forms like *arici* and *paricu* (cf. *ari*, 10: 5-2; *pari*, 10:12-5) may have been the result of the change of *c* (*ś*) into *y*. The position of *y* between two vowels may have led to the loss of the friction of *y*, when the weakened *y* dropped out.

ñc

ñc > *ññ*:

10th: *āraññu* (2-47), *amaiñña* (11-10) (*amaiñca*, 6-43) *kuṟaiñña* (11-14), *kalaññu* (12-2) (*kalañcu*, 4-53[5]), (cf. also *kañci*, 12-2 for modern *kaññi*), *paṭiñcāyiṟu* (2-42) for *paṭiññāyiṟu* (2-12) < *paṭuñāyiṟu* is a false restoration.
11th: *kalaññu* (1-4[3]), *amaiñ(ñ)a* (1-5) (*amaiñca*, 6-3[2]), *Kuññikuṭṭavarm-maṉ* (6-27[3]) (*Kuñcikuṭṭavarmmaṉ*, 6-6), *paṟaiññu* (6-20), *maṟṟoḻiñña* (7-2).
12th: *oḻiññōm* (1-62), *kaḻiññu* (5-253[2]), *paṟaiññu* (5-263).
13th: (*cf. amaiñca*, 5-2).

ñ

ññ (in *aiññāḻi*, 10th: 7-19[4], 12th: 2-97) < *ńń* resulting from the sandhi of *ai*, the base for 'five', and the initial *ń* of *ńāḻi* reflects a Middle Tam. change (cf. V, *Cāṅtippaṭalam*, 17 and *N*, 124).

In *paṭiññāṟu* (< *paṭuñāyiṟu*) the *ñ* is lengthened on account of the accent (?) resulting from the change of *u* to *i*.

ṭ (*ḍ*)

This is retained without change in native as well as in loan-words, as in *āṇṭu*, *taṇṭam* (< Skt. *daṇḍa*), etc. It is noteworthy that the phenomenon of nasal assimilation common in modern Mal. in popularly used IA words like *daṇḍam* (*daṇṇam*) is not represented in the inscription.

ṭ < (*IA*) *ṣ*:

10th: *Cittirai viṭu* (5-19) < Skt. *viṣu*.
13th: *Mēṭam* (4-3) < Skt. *Meṣa*, *Iṭapam* (4-3) < Skt. *Ṛṣabha*.

ṇ

No change is represented

t (*d*)

tt > *cc*:

The palatalisation of *-tt-* to *-cc-*, like nasal assimilation, was a very important feature of the development of Malayāḷam phonology. Although

Tamil colloquials show this from at least the Middle Tamil period, it was in the west coast speech that the change operated as a regular rule and gained acceptance in literary writing.

The palatalisation of *-tt-* to *-cc-* is met with in the following:—

1. Past stems of verbs with basal front vowels or front vocalic elements:

10th: *vaccu* (2-10[8]) (*vaittu*, 1-43), *amacc-* (7-6[8]) (*amaitt-* 4-5), *rakṣicc-* (13-12), *camaicc-* (2-4), *ceyvicc-* (2-5) *ceyvittu*, 1-6), (cf. also *aṭṭu-vittu*, 1-25).
11th: *muṭṭicc-* (2-4), *paṟṟiccu* (4-2), *amaccu* (4-2[2]), *vaiccu* (6-20), *vaippiccu* (6-21), *uruvaticcu* (7-3), *viṭṭiccu* (7-3), *ceyyiccu* (8-2).
12th: *ṅaṉaicc-* (1-39[3]), *vaicc-* (2-67[3]), *karpiccu* (2-69[6]), *amaicc-* (1-28[5]), *jīṟṉiccu* (5-4), *vāḷiccu* (5-22), *piṭicc-* (5-38), *atikariccu* (5-39[3]), *kaḷukiccu* (5-275), *kalppicc-* (5-55[5]), *pūṭṭiccu* (5-237), *ceyyiccu* (6-4), *vaippiccu* (7-20), *vāḷiccuvaccu* (8-28).
13th: *vaccu* (1-11), *ceyviccu* (4-5[4]), *muṭicc-* (4-5[2]), *aṭicc-* (4-16), *kalppicc-* (5-3[2]), *camaicc-* (5-7).

2. IA-*ty-* > *-tt-* >*-cc-*:

10th: *Āticcaṉ* (13-5) < * *Ātittaṉ* < Skt. *Āditya*.
12th: *Āticcarāmaṉ* (8-10).
13th: *Āticcaṉ* (4-15).

3. *-cci* as gender denoter < *-tti* < IA. *strī*:

13th: *tēvaṭicci* (4-6).

t > *l*:

Final *t* is changed to *l* in Skt. loans as in *candrādityaval* (11th: 6-7). It may be noted here that Skt. *t* or *d* when immediately followed by plosives or *m*, *s* are evaluated in Malayāḷam (and to a lesser extent in Tamil) as *l*. The form *candrādityaval* shows that the practice goes back to the Early Old Mal. period.[6]

ṅt (*ṅd*)

ṅt > *ṅṅ*:

The assimilative change of *ṅt* to *ṅṅ*, like that of *ṅk* to *ṅṅ*, is one of the earliest and most characteristic changes suffered by Malayāḷam. The

6. cf. *PMP*, III. Cf. also, Aiyar "A South Indian (Malayāḷam) Evaluation of Sanskrit", *Indian Historical Quarterly* 13. 279 ff.; K. Godavarma, *Indo-Aryan Loan-words in Malayāḷam*, pp. 112, 136.

change appears to have started in the voiced groups of IA loans and in the native *ńt* getting a certain amount of voice in unstressed positions or due to lax pronunciation. From the eleventh century the assimilation is seen in accented positions also, and by the close of the Early Old Malayāḷam period it becomes a well-established rule in the speech of Kēraḷa.

1. In past stems:

10th: *cārńń-* (12-5).
11th: *vańńiruńtu* (3-4[2]), *iruńńu* (7-1[2]) (*iruńtu*, 7-3[5]), *tańńu* (8-5).
12th: *iruńń-* (1-15[8]), *vańńu* (1-58[4]), *tańńa* (5-4), *aḷańńu* (5-38[4]).
13th: *iruńń-* (1-1).

2. In IA loans:

10th: *cańńaṇam* (8-1) (*cańtaṇam*, 5-21[3]), *Cēńńaṉ* (8-1[4]), (*Cēńtaṉ*, 3-2; < *Jayanta*).
11th: *Parańńavaṉ* (6-8[3]) (*Parańtavaṉ*, 10: 13-24).
13th: *Kōvińńaṉ Ceńńaṉ* (4-8[6]) (*Kovińtaṉ*, 11: 1-2).

" Old native *ńt*, when preceded by *i*, *ai* or *y*, changed to *ñc* already in the Middle Tamil stage: *moḻiñc-*, *aiñcu-*, *aṟiñc-* Malayāḷam has accepted palatalised forms with *ñc* uniformly in its literary dialect." In many forms Malayāḷam has further changed *ñc* to *ññ* (see under *ñc* for examples). It appears that by the tenth century the *ńt-* forms in the west coast dialect had changed to *ñc* and then to *ññ* in the large majority of cases.

ń

The distinction between the dental *ń* and alveolar *ṉ* seems to have been preserved well in the west coast dialect, although such distinction began to be obliterated in Tamil during the Middle Tamil period (see *PMP*, III). Two or three instances of ' confusion of symbols ' occurring in the inscriptions studied here (as in *tiruviḻāvińńu* 10th: 8-3 for *tiruviḻāviṉṉu*) have to be taken only as orthographic errors.

The long *ńń* of Malayāḷam is derived from *ńt* or *ṉṟ*. During the Early Old Malayāḷam period only the *ńń* < *ńt* is generally represented.

ṟṟ

The long alveolar plosive does not undergo any change. There is no means of determining whether it was pronounced with the ' excrescent *ṟ* ' (as in Tamil) or no.

ṉṟ

The alveolar group *ṉṟ* is peculiar to the Tam.-Mal. group of speeches. Early in its history, the Mal. speech changed the old *ṉṟ* into *ńń*. Since only in

two instances is this change represented in the inscrr. studied here, it can be safely stated that the change of *ṉṟ* into *ńń* may have become fully established sometime after the assimilative changes in the consonant groups *ṅk* (> *ṅṅ*), *ñc* (> *ññ*), *ńt* (> *ńń*). (*Cf. PMP*, III.)

From the fact that *ṉṟ* changed to *ńń* in Mal., it is tenable to assume that *ṉṟ* was evaluated as a voiced alveolar plosive which in course of time fell together with *ńd* (< *ńt*) and suffered the change to *ńń* along with *ńt*:

11th: *ńaṭuvāḷuńńa* (7-3) *vāḻiṉṟa,* (7-1).

12th: *eṉṉu* (4-21); apparently *eńńu* has been intended by the scribe. (cf. *eṉṟu,* 1-63).

In fixing the chronology of the change of *ṉṟ* to *ńń* the absence of the sixth case termination *ṉṟ* in Early Old Mal. inscrr. on the one hand and the appearance of the termination in the fourteenth century texts like *Uṇṇuńīli-sańdēśam* on the other have to be taken into account. In consonance with the well-known assumption in historical linguistics that a sound change may cease to operate after a certain period, without affecting an identical phoneme which arises at a later stage, we are justified in the assumption that the change of *ṉṟ* to *ńń* had ceased to function by the fourteenth century. This would mean that the old *ṉṟ* had everywhere changed to *ńń* in the *colloquials* by the time the sixth case termination *ṉṟ* developed, although the traditional symbol for *ṉṟ* was used to represent the *ńń* group as well. It was at this stage that the genitive *ṉṟ* materialised, and, naturally enough, it was represented with the old symbol. Later on, however, *ńń* came to be written with a different symbol in order to avoid confusion. Needless to say, this is all a tentative assumption, and the entire problem deserves a very careful investigation.

ṉ

ṉ > *ṇ* :

10th: *mēṉikkāṇam* (1-8) (*mēṉikkāṉam,* 1-9).

IA: *cańńaṇam* (8-1) (*cańtaṉam,* 8-2).

11th: *kōṇmai* (5-1; < *kōṉ*).

ṉ > *y*:

11th: *muṭṭiya* (2-5) (*muṭṭiṉa,* 7-2).

ṉm < *IA* (*Skt.*) *rm:*

11th: *vaṉmar* (5-2) (*varmaṉ,* 7-2).

In sandhi positions *ṉ* changes (1) to *ṟ* as in *piṟpākam* (< *piṉ-pākam*) (13th: 5-10); (2) to a homorganic nasal, as in *Cāttńkaṇṭaṉ* (10th: 4-27; < *Cāttaṉ-kaṇṭaṉ*).

p

p < b of IA loans:

10th: *pali* (4-46; < Skt. *bali*), *Capaiyār* (11: 7-1).

p > v:

10th: IA: *Kaṇavati* (5-10) (*Kaṇapati*, 6-26), *Tavai* (11: 8-4).

mp

mp > pp in sandhi contexts:

10th: *ceppuppattiram* (1-14); < *cempu-pattiram*).

m

m > ṉ:

12th: *Ceṉpakaceri* (5-12²) cf. *Cempakaceri*).

m > v:

11th: *caravum* (11: 5-11) (cf. *tōraṇamum*, 5-10). It may be noted here that the change of final *m* to *v* when the conjuctive particle *-um* is added appears to have come into general vogue only in the Late Old Mal. period. (Cf. *PMP*, III).

y

y < c (*ś*):

See above, under *c*, and below, under *ś*.

y > ḷ:

12th: *ārāḷcca* (6-7) (cf. Tam. *ārāycci*).

The initial *y-* of *yāṇṭu* is often dropped, as in *āṇṭu* (10th: 7-1).

" *y* of Old Tam. *yāṇṭu*, *yāṭu*, *yāṟu*, *yār*, *yāmai*, is absent in early Middle colloquial and in Malayāḷam. Cf. the colloquial Malayāḷam evaluation of *ejamāṉaṉ* for Skt. *yajamāna*, *eṅtram* for *yantra*, etc."

The final *-y* of *kāy* is dropped in a 12th century inscr.: *aṭaikkā* (5-45⁷) (cf. *aṭaikkāy*, 11th: 8-5), *paḷukkā* (5-59).

The presence of an unusual *y* in the following instances perhaps indicates that a palatal tone-colour was given to the preceding *i*, *e*, or *ai*. (The 'needless' *y* is shown in circular brackets).

10th: *paḷḷiyārē* (*y*) (2-18²) (cf. *paḷḷiyārē*, 2-10), *pūmi* (*y*) *kku* (2-1) (*pūmikku*, 14-10), *vārātē* (*y*) (2-4), *Puṉṉaittalai* (*y*)-*pati* (2-9) (cf. *Puṉṉaittalai-p-pati*, 2-42), *aṟi* (*y*) (5-9) (cf. *ari*, 5-2).

11th: *ipparicē (y)* (8-4), *taṅṅaḷē (y)* (8-6), *Kuṟumpuṟai (y) iṅāṭu* (11: 6-26).
12th: *amaiccuḷḷuṟuti (y)* (1-29), *Oṟṟi (y) ur* (5-104), *celutt (y)* (5-260) *patiṉoṟāmāṉṭai (y)* (2-13), *vai (y) ppāṉ* (5-106). (cf. *vaippāṉ*, 5-45), *patiṉai (y) mpaṟa* (5-123[5]).

y < (*Skt.*) *h:*

10th: *vāyiṉam* (2-30; < Skt. *vāhaṉa ?*).

r

r > *ṟ*:

10th: *paṅṭīṟaṭi* (3-5) (cf. *paṅtīraṭi*, 9-1).
12th: *tampimāṟku* (3-1), *Mahādēvaṟku* (4-33) (cf. *aṭikaṉmārkku*, 5,271; *paṭṭārakaṟkku*, 6-3), *tēvaṟku* (4-31), (*tēvarkku*, 10: 12-7).
13th: IA: *Kaṟkaṭakattil* (1-1) (*Karkkaṭakattil*, 12: 3-1).

" The phonetic reason for the change of *r* to *ṟ* in consonant groups in which *r* is followed by a plosive or by *v* or by *m* is to be sought for in the character of the post-dental *r* (produced by only a few taps). The attempt to preserve it without being slurred over (as it often is in many colloquial expressions) raises the point of articulation of the tongue-tip and at the same time increases the trilling ".

Skt. *r* is evaluated as *l* in *ilakkiccu* (10: 2-25[2] < Skt. *ṟakṣ-*).

r is dropped in the following instances:

10th: *avakaḷ* (9-2[4]) (*avarkaḷ*, 6-102), *ivakaḷ* (12-5[3]) (*ivarkaḷ*, 12-5), *paṭāra atikārikaḷ* (11-13; for *paṭārar* etc.) (*Cirikumāṉ* (12-5) (cf *Kumaraṉ*, 4-4; < Skt. *kumāra*).
11th: *Māttāṉṭaṉ* (5-21) *Mārttāṉṭaṉ*, 1-1; < Skt. *mārttāṇḍa*), *pirakiti* (6-9) *pirakiriti*, 5-20); < Skt. *prakṛti*); *ivakaḷ* (7-1) (*ivarkaḷ*, 6-17).
12th: *avakaḷ* (4-30).

Skt. *rm* in the form *varma* is often changed to *ṉm:*

10th: *Iṅtukotai-vaṉmar* (12-1).
11th: *Pārkaraṉ Iravi-vaṉmar* (5-2).
12th: *Utaiyamāttāṉṭa-vaṉmar* (4-1) (cf. *Maṇikaṇṭa-Rāma-varmar* (7-11).

l

l > *ḷ:*

l is sometimes 'cerebralised' as in *Tirukkāḷkkarai* (10: 11-4[2]; cf. *Tirukkālkkarai*).

l < *Skt. r:*

Skt. *r* in *rakṣ-* is evaluated in two instances as *l: ilakkiccu* (10: 2-25[2]).

ś

Though this phoneme is not represented in writing in the inscrr., it appears to have existed in the actual evaluation of what was usually represented with the symbol for *c* in medial positions.[7] This is shown by the fact that medial *c* is sometimes changed to *y* (as in *ariyi*, 12: 4-25), which implies the intermediary stage of *ś*. The further fact that Skt. *ś* is often represented with *y* (as in *Kēyavaṉ*, 10: 6-35; < *Kecavaṉ* < Skt. *keśava*), also bears out this view.

(See under *c* for examples). Cf. also *Iyāṉamaṉkalattu* (10: 5-6).

ḷ

ḷ > *ḻ*:

This change is represented in a few instances in the 10th century inscrr: *kārāḻar* (2-2) < *kārāḷar*), *keḻppiccu* (12-6; < *kēḷ-*), *Kāḻkkaraiṅāṭu* (12-6) (cf. *Kāḷkkarai*, 12-1).

ḷ > *ṇ* (in sandhi):

10th: *kārāṇmai* (14-12).
12th: *potuvāṇmār* (5-253; cf. *potuvāḷmār*, 10: 13-13), *aṭikaṇmār* (5-271).

ḷ > *ṭ* (in sandhi):
10th: *uṭpaṭa* (2-7; cf. *uḷ-p-paṭa*, 2-10).

v

v > *m:*

10th: IA: *Miriccika* (13-2 < *Viriccika* < Skt. *vṛścika*).

v < *p:*

10th: IA: *Kaṉavati* (5-10) (*Kaṉapati*, 6-26).
Parańtavaṉ (13-24) (cf. Skt. *parantapa*).

The form *viḷuvu* (12: 5-259) shows that the Malayāḷam habit of incorporating the glide-developed *v* in the noun base goes back to the Early Old Malayāḷam period. (Cf. *EMM*, p. 5).

7. This phonological feature of the Tam.-Mal. group (viz. c > ś > *y*) goes back to the Old Tamil period and throws interesting light on the phonemic structure of Old Tamil and also on an important grammatical point, namely, the conception of the āytam (< Skt. āśrita ?). See in this connection, C. R. SANKARAN and N. K. SRINIVASAN, "The phonemic variants of āytam in Old Tamil," *BDCRI*, 2. 343 ff.; L. V. R. AIYAR, "A Problem Dravidic Phonology," *JOR*, 6, 11 ff.; A. MASTER, "Intervocalic plosives in Tamil," *BSOS*, 9. 1003ff.

ḻ

ḻ > ḷ:

12th: *kiḷakk-elḻai* (4-9) (*kiḻakku*, 4-12).

ḻ < *IA.* ṭ:

10th: *ńāḻi* (3-3; < Skt. *nāḍi*).
12th: *bhaḻārar* (8-8; cf. *paṭāra*, 10: 11-13; < *bhaṭṭāraka*). ḻ < IA. ṣ(*kṣ*) (through ṭ ?): *puruḻar* (11th: 6-14) < *puruṣa*), *viḻuvu* (12: 5-259 < *viṣu*), *iraḻccikka* (10: 12-6; < *rakṣ-*).

ṟ

ṟ < *r* :

See above, under r.

See under Sandhi (chapter IV) for the ṟ produced in sandhi positions.

CHAPTER IV

SANDHI

A

VOWELS AND VOWELS

With a few exceptions the intervocal glides *v* and *y* are written in the inscriptions. Generally speaking, the front glide-developed *y* is used after front vowels and the back glide-developed v after back vowels, as in Tamil.[1]

Examples: *v*:

10th: *potu-v-āḷ* (6-14), *tiru-v-akkiram* (12-2), *tiru-v-amutu* (13-9).
11th: *potu-v-āḷ* (1-2), *cara-v-vum* 5-11), *Muññaṅāṭu-v-uṭaiya.*
12th: *ceyakaṭ-v-ōlaikkaraṇam* (4-7), *vaṭa-v-ellai* (4-12), *tiruviḷā-v-iraṇṭiṉṉu* (5-34), *tiru-v-aṭi* (8-9).
13th: *tiru-v-amirtiṉṉu* (1-4), *tiru-v-uṭampu* (4-4), *tiru-v-uḷḷam* (4-6), *maṅ-tira-v-ōlai* (4-12).

y:

10th: *tēvarē-y-aṉukkirāmaññceyvārāka* (1-20), *vayalkkāṭē-y-ellai-y-ākavum* (2-11), *ṅāḷi-y-uri* (5-3), *ittaṉai-y-ilum* (6-114), *ṅiccaṅaṭai-yē* (6-63), *pūmi-y-um* (9-2), *pari-y-āvatu* (10-2).
11th: *avai-y-uḷavu uḷavum* (1-3), *iṭupaṭi-y-um* (5-10), *kaṟi-y-um muṭṭi-y-ūṉ oṉṟu kurai-y-ilum* (8-5), *tiru-v-uḷḷam paṇṇi-y-aruḷiyār* (1-27).
12th: (*mēṟpaṭi*) *-y-ūril* (5-12, etc.).

y used after back vowels:

11th: *icceppēṭṭilppaṭṭa-y-ilēkaiyiṉāl* (6-14).
12th: *Puṉa-y-ūrāl* (5-31), *tirukkuṭa-y-iraṇṭu* (5-54).
13th: *Iṭapa-Viyāḷattu-y-ikkollam* (4-3).

" It may be mentioned that for Tamil, Naṉṉūl already justifies instances like ā-y-iṭai, through its statement *tūkkiṟ cuṭṭu ṅīḷiṉ ya-kāramum* in sūtra 163."

1. Vowels which are produced by narrowing the front cavity against the hard palate and teeth are the front vowels. When a constriction occurs in the back part of the throat back vowels are produced. Cf. G. Oscar RUSSELL, *Speech and Voice* 73. (New York, Macmillan Co., 1931). See also chap. 13, pp. 101-118 for his discussion on back vowels.

Līlātilakam, III, 1, lays down that the glide *y* crops up between contiguous vowels in vocalic sandhi (*sandhāvacōrmadhye yaḥ*); and the *comm.* gives the examples *mālayatu, vāṭāyatu, kiḷiyatu, piṉṉeyatu*, etc. "The prescription of *y* as the intervocal glide 'when vowel meets vowel,' in general terms as a *sāmānyavidhi*, and of the following *sūtras* as *viśeṣavidhis* impliedly brings out some differences between the Malayāḷam (of the period of *Līlātilakam*) and Tamil. The rule in Tamil is to use *y* after front vowels and *v* after back vowels; and this practice is observed in many early west coast inscriptions. The gradual disappearance in Malayāḷam of contexts where *v* was originally used (as in infinitives, which in Malayāḷam came to be used, in the course of its early history, with *ē*), and the increasing popularity of *y* (as in *vāṭāyatu*, an illustration supplied by the *vṛtti*) have led to this *sāmānyavidhi* being laid down." (GL, p. 60).

Glides are not written in the following instances:

10th: *ittaṉai-ilum* (6-6).

11th: *potu-āḷum* (1-3), *Kōtai-Iravi* (5-25), *paṇi-uṭaiyavakaḷ* (7-3).

12th: *aruññāḷi uri āḷākku* (5-76[6]), *Koṉṟai-aṟaikku* (5-85), *Koṭutā-aṟaikku* 5-18), *Kuṟṟi-ūrāl* (5-89), *meṟpaṭi-ūril* (5-98), *muññāḷi-uḷakku* (5-165), *kuṭi-irukkiṉṟa puraiṭam* (5-203), *kūṭṭamā iṟuññu* (5-252).

13th: *pa-iṟu* (2-2), *Kaita-akattu* (2-3), *taḷi-atikārañceytu* (4-12).

The long glide -vv-:

After the short demonstratives *a* and *i* and before vowels following, long *-vv-* is generally written, as in Old Tamil. But there are instances where the short *-v-* is met with, as in inscriptional Middle Tamil. (Cf. *PMP*, IV, A, 3.). *Līlātilakam* permits both the short and long glides (*aditōḥ kevalayōrvaḥ; tasya dvitvam vā. L*, III, 2 and 3).

1. Long *-vv-* is written in the following instances:

10th: *a-vv-āṇṭu* (4-3), *i-vv-āṇṭu* (1-3), *i-vv-Iḷavar* (1-14), *i-vv-oṉpatum* (12-3).

11th: *i-vv-opātiyāl* (7-2).

12th: *i-vv-āṇṭu* (2-76), *i-vv-ūr* (2-93), *i-vv-ellai* (4-13).

2. The following examples show the short *-v-*:

11th: *i-v-amaiñña* (8-5).

13th: *aviṭe* (2-2).

B

Consonants and Vowels

"The gemination before vowels following of *l*, *ḷ*, *ṉ*, *ṇ*, *y* of monosyllabics (with short vowels) is the general rule in pada-sandhi and inflexional sandhi."

Examples:

12th: *ńel-l-āl* (2-86), *teṉ-ṉ-ellai* (4-10), *koḷ-ḷ-um* (5-37), *ńey-y-y-amirtu* (5-40), etc.
(See under 'Nominal Inflexions' for more examples.

Instances without gemination are also met with (as in Middle Tam. inscrr.).:

10th: *ńel-iṭaṅkaḻiyāl* (7-13).
12th: *kal-eḻuti* (1-64), *ńel-aṭṭi* (2-105).

"The change of *-m* (of *-am*) to *v* before the samuccaya *-um* is a feature that has been permanently embodied in literary Malayāḷam." Since the inscriptions show only one instance of the change (viz. *caravum*, 11: 5-11), it seems to have come into general vogue only after the Early Old Malayāḷam period.

C

Vowels and Consonants

After the short demonstratives, the following consonants are generally doubled, (as in literary Tamil. Cf. *PMP*, IV, C, 1).

10th: *i-ń-ńālu kuṭi* (1-12), *e-v-vakaippaṭṭār* (1-18), *e-p-piḷai* (1-18; cf. *ī piḷai*, 2-19), *i-t-taṇṭam* (5-25), *i-c-celavu* (9-2), *i-ń-ńel* (11-14).
11th: *i-c-ceppēṭṭil* (6-13), *i-v-vaṇṇam* (7-2), *i-t-tiruvārātaṉam* (8-2),
12th: *a-c-cerikkal* (2-61), *i-ń-ńāḷāl* (4-2), *i-m-mārkkam* (5-250).
13th: *i-p-paṇi* (4-8), *i-ń-ńāḷ* (4-8).

In the following instance the doubling is not represented:

11th: *i-taṇṭam* (8-4).

"*i* and *ai* (the base for 'five') when followed by *ń* change *ń* to *ññ* occasionally according to the Middle Tamil grammars *Vīracōḻiyam* (sandhi 15 and 17) and *Naṉṉūl* (124)." The form *aiññāḻi* (*aññāḻi*) (10: 7-4, etc.) embodies this change, but forms like *aińńūṟṟu* (10: 3-3) and *aińńāḻi* (12: 2-70) are also represented in the inscriptions.

Plosives meeting short final vowels in external sandhi are doubled in the following types (as in Tamil):

1. *Casal compounds:*

10th: (a) *Puṉṉaittalai-p-pati* (1-5), *mēṉi-p-poṉ, poli-p-poṉ* (1-9), *kō-p-patavāram* (2-36), *pati-p-patavāram, pū-k-kuṉṟi* (6-47), *añti-t-tiruvamirtu* (10-5), *Meṟṟaḷi-p-pōḷaṅ-kumaraṉ* (12-2), *paruṭai-p-perumakkaḷ*, (13-4).
(b) *avakaḷai-t-taṭumāṟa-p-peṟār* (1-19), *kārāṇmai-c-ceytu* (7-12).

11th: (a) *Tiruṅelli-p-perumāḷ* (6-4), *veḷḷi-p-pāṉai* (6-27).
(b) *vāḷai-k-kāy* (8-2).

12th: (a) *akaṅāḻikai-c-celaviṉṉu* (5-6), *atikārikaḷai-k-koṇṭu* (5-266).
(b) *Karkkaṭaka-v-Viyāḻam* (7-1), *veḷḷi-t-tiruvaṇukka-t-tuṭi* (8-11).

13th: (a) *tavai-p-potuvāḷ* (2-1), *Kumpa-v-Viyāḻattil* (3-1).
(b) *kai-k-koṇṭu* (5-6).

2. *Non-casal compounds:*

10th: *kō-t-Tāṇu-Iravi* (1-1), *pār-k-kōl* (1-11), *Tarisā-p-paḷḷi* (1-13), *iraṇṭarai-k-kāṇam* (5-15), etc.
11th: *pāti-c-cōṟu* (6-12), *tiru-ppali* (7-2), *iruṅāḻi-c-ceytu* (7-2), *kīḻ-c-cānti* (7-2), *patiṉāḻi-p-paṟai* (8-5).
12th: *Kurakkēṇi-k-Kollattu* (2-18), *ṅiyati-p-paṭi* (3-1), etc.
13th: *karai-p-purayiṭattiṉ* (1-8).

3. *Infinitival sequences:*

10th: *koḷḷa-p-peṟār* (1-10), *viyāparikka-p-peṟuvar* (1-15), *aḷakka-k-kaṭaviyar* (7-30), etc.
11th: *aṭṭa-k-kaṭaviyar* (2-3), *cella-k-kaṭavaṉ* (6-21), etc.
12th: *koṭukka-p-peṟār* (5-272), *kūṭa-k-kaikkoṇṭu* (7-19), etc. See Section II, under *Infinitive Participles*, for more examples.

4. *In sequences of past stems* (with *-i*) and words following:

10th: *aṭṭi-k-kuṭuttēṉ* (1-23), *iruṅtaruḷi-p-piṭiṅaṭatti* (2-7).
11th: *kūṭi-c-ceytu* (7-1).
12th: *kūṭṭi-k-koṇṭu* (1-13), *ṅāṭṭi-k-koṭuttār* (1-66), *piratiṭṭapaṇṇi-t-taṅṅa* (5-4), *ṅīrōṭṭi-k-koṭuttāḷ* (6-2).
13th: *keṭṭi-c-cārtti* (1-109), *kūṭṭi-k-koṭutta* (5-6).

In the following instances, the doubling of the plosive is not represented:

10th: *celutta-kaṭaviyar* (12-4).
11th: *pañtīraṭi-tiruvamirtu* (6-10), *taṇṭappaṭa-kaṭaviyar* (8-4).
12th: *koti-kūṟa* (5-53), *aṟupatu paṟai-ceytu* (8-17), *karaipurai-yiṭam* (5-39).

"This absence of the representation of the doubling in contexts where the literary rules[2] prescribe doubling obligatorily, is met with in Middle Tamil inscriptions also .... It must be understood that both in Tam. and in Mal. colloquials, the actual value of the plosives concerned is long; and so the lack of gemination in these instances is purely a scribal practice."

Initial plosive is usually doubled when it meets the final *samvṛta* of the preceding word (as in Tamil; cf. *PMP*, IV, C, 6):

10th: *Tāṉu-Iravikku-t-tan* (1-1), *ceppu-p-pattiram* (1-14), *aṭṭuvittu-k-kuṭut-tāṉ* (1-25), *Mēṭaññāyiṟṟu-c-ceyta* (11-3).
11th: *iruṅūṟṟu-k-kalattiṉ* (8-1).
13th: *tīrttu-k-kōṭuppitu* (1-12), *Tulāññāyiṟṟu-c-ceyta* (2-1).

Instances without doubling:

10th: *ceppu-pattiram* (2-10), *ńūṟṟu-kalam* (9-1), *vittu-pāṭṭāl* (8-23).
12th: *vittu-pāṭiṉmēl* (5-113).
13th: *Melkkāṭṭu-cokiyār* (5-6).

Plosives following are geminated when they meet long vowels:

10th: *Tarisā-p-paḷḷikku* (1-24).
12th: *muṭṭā-c-celavu* (3-1).

After the long demonstrative *ī* no doubling of plosive is represented:

10th: *īpiḷai* (2-19).

D

Consonants and Consonants

-*l* + *k*-, *p*-, *c*-:

Līlātilakam, 3, 26 (*laṉayōḥ kacapeṣu raḥ*), prescribes for Malayāḷam the literary Tamil change of *l* > *ṟ* (the alveolar lateral changing to an alveolar plosive), and the commentary states that the retention of the *l* is not suited to the genius of *Keraḷa bhāṣā*.[3] *Sūtra* 20 of the same *śilpa* (*yaralaḷebhyāḥ kacatapānām dvitvam*), however, envisages the doubling of -*k* after *l*- without the change, and the commentary gives the instance *pāl-k-kiṇṭi*.

The inscriptions have instances with and without the change of *l* > *ṟ*, but there is a progressive tendency to discard the Tamil rule and to optionally double the plosive following. "This tendency became fixed in Mal. in later stages; and wherever literary Tamil required the change of *l* to *ṟ* in this

2. Cf. *Līl*, III, 8, 9, 10 and 11.
3. The rules of sandhi in *Līlātilakam*, the fourteenth century Malayāḷam grammar, throw considerable light on the external sandhi types of Old Malayāḷam. I have attempted to evaluate the inscriptional materials presented here from the standpoint of *Līlātilakam*.

context, Mal. characteristically 'doubled' the plosive following without altering the character of the alveolar lateral itself (except to devocalise it partially)."

(i) The following instances embody the change of *l* > *ṟ*:

10th: *ńāṟ-kalappāṭu* (4-6[4]), *ńāṟpatu* (4-44[5]), *Mūḻikkaḷa vyavastaiyāṟ keṭṭakkaṭavar* (4-51), *Kaccikāṭṭiṟ patinṟūṉippāṭu* (4-37), *tirukkōyiṟk-amaiñca* (6-36), *kōyiṟku,* (6-54), *Ōroṭiyiṟ pātiyum* (7-8[2]), *Ciṟumaṉaliṟ kūṟum* (7-9[4]), *pukaiyaramaṇṇiṉāṟ celvitu* (8-1[2]), *Veṭṭikkarikkāṭṭiṉmēṟ celvitu* (12-7), *Ayiruriṟ piratiṭṭaiceyta* (13-6), *aṭṭiṟpeṟu* (13-8), *mēṟ-collappaṭṭa* (13-17), *ńāṟ-paṟai.*

11th: *ńāṟ-k-kaḷaiñu* (1-4), *eṇṇaiyiṟ pāti* (2-6).

12th: *ńāṟpatiṉkalam* (1-32[2]), *ńaṭuviṟ-kiṭańta* (4-14), *koyiṟkuṟi* (4-18), *Mutaṟkkuṉṟattāl* (5-152), *kaṟppicca* (5-274[2]).

(ii) In the following instances the *l* is unchanged and sometimes the following plosive is doubled:

10th: *ceppupattirattil-p-paṭṭavaṇṇam* (2-23), *avirōtattāl-k-kūṭicceyta* (3-1), *Maṇvelippuraiyiṭattil pātiyum* (7-10), *Kaṇṭiyūril Puṉṉaiccērippuraiyiṭam* (7-21), *ńālppattiru* (11-13), *kaiyyāl poṉ koṇṭu* (12-1).

11th: *kalliṉmēl-k-kāṭṭi* (3-5), *puḷḷippaṭil-p-paṭṭavar* (7-2), *eṇṇaiyil-p-pāti* (7-2), *avirōtattāl-k-kūṭi* (8-1), *kariyil-p-pukku* (8-5).

12th: *ńālppatiṉ* (1-17[5]), *ńālpatu* (5-152), *aṭṭilpēṟ* (1-21), *mēl-pātikku* (4-19[2]), *mēl-p-pātikku* (6-6), *Ciṟṟel koḷḷuńńel* (5-6), *Toḻukkāl koḷḷum* (5-21), *Ciṟamel-purayiṭattāl* (5-49), *mēl-cāńti* (5-65[2]), *mēl-c-cāńti* (8-15), *kāvalkku* (5-106), *nāl-p-paṟa* (5-156), *puraiyiṭattil-k-kuṭi iṉṟiye irukkil-p-pańtiru,* etc. (5-255), *ńāl-k-kalam* (6-5[2]), *maṇṭapattil-k-koṇṭuvańńu* (8-24[2]).

13th: *caṉṉatiyil-k-kūṭi* (1-3), *aṭṭil-p-peṟṟōlaikkaraṇam* (2-1), *Melkkāṭṭu* (5-6).

ṉ + *k-, p-, c-:*

Līlātilakam, 3, 26, prescribes the literary Tamil change of *ṉ* > *ṟ*. The commentary gives examples like *poṟkaṇṇāṭi, poṟ-pū* and points out that the change of *ṉ* to *l* is not proper in such contexts. This, incidentally, shows that the Mal. change of *ṉ* to *l* goes back to a very early date. The inscriptions studied here, however, show only the change of *ṉ* > *ṟ*, whenever a change is embodied.

(i) *ṉ* >

12th: *celaviṟ-ku* (2-123), *teṟku* (4-13), *avaṟṟiṟ-ku* (2-124).

13th: *Nārāṇatātariṟ piṟpākam* (5-10).

(ii) without change:

10th: *Vēṇāṭṭiṉ-ku* (13-23).

The form *Puṉcaippaṭakārattu* (10: 3-2), it is noteworthy, does not show the assimilation of *ṉ* to a homorganic nasal as is the case today.

The following instances where a father and son (or uncle and nephew) relationship is indicated, show the assimilation of *-ṉ* to a homorganic nasal prescribed by *TE*, 342 (cf. *PMP*, IV, D, 2, footnote).

10th: *Kaṭamaṅ-Kumaraṉ* (4-4), *Cāttaṅ-Kaṇṭaṉ* (9-1), *Nārāyaṇaṉ-Kiriṭṭaṉ* (9-1), *Tēvañ-Cāttaṉ* (12-15) (*Tēvaṉ-Ceññaṉ* (8-1), *Kēraḷañ-Cirikumāraṉ* (12-5), *Kaṇṇaṉ-Kumaraṉ* (12-5), *Ūraṅ-Kōttaṉ-Kōtai* (12-5), *Śrī-Vallapaṅ-Kōtai* (13-7), *Cāttañ-Caṭaiyaṉ* (13-26).

11th: *Mūrkkañ-Cāttaṉ* (5-28), *Iyakkañ-Cirikaṇṭaṉ* (7-1), *Āticcaṅ-Kōtai* (8-1), *Etiraṅ-Kaviraṉ* (8-1).

12th: (*Cēkaraṉ-Kumaraṉ*) (4-6), *Koviṅtaṅ-Kumaraṉ* (6-8[2]), (cf. also, *Vikkiramaṉ-Paraññavaṉ*) (7-30).

13th: *Koviññañ-Cuṅtaraṉ* (4-10) (*Attaṅkoviññaṉ-Ceññaṉ*, 4-8).

-l + t-:

Līlātilakam, III, 27, prescribes the Tamil change into *ṟṟ* by a "progressive assimilation of the dental plosive to an alveolar plosive and also a regressive one in the change of the lateral *l* to an alveolar plosive". But since the inscriptions have instances of this change only in the tenth century and since illustrations in the Old Mal. texts are very rare (see *PMP*, IV, D, 3, iv) it is evident that the change did not strike root in Malayāḷam. "That *Līl.* followed merely a tradition here is also clear from *sūtra* 20 (*yaralaḷaḷē-bhyaḥ kacatapānām dvitvam*) which prescribes the doubling of *t* after *l*."

(i) *-l + t- > ṟṟ*:

10th: *piḷaiyuṇṭākiṟṟaṅkaḷaikkoṇṭē* (2-47), *ñāṟṟūṇippāṭu* (4-22), *mēṟṟaḷi* (12-2).

(ii) *-l + t- > ltt*:

12th: *kōyilkkal-t-taṇṇīryaṭuppāṉ* (5-187), *Karkkaṭaka-v-Viyāḷattil-t-Taṉu-ñāyiṟṟu* (8-7).

13th: *iṭaippaṭṭa kālattil-t-tiṅkaḷ*, etc. (4-4).

ṉ + t-:

"*Līl.*, 3, 27, lays down the Tamil literary rule of *ṉ + t > ṟṟ* for compounds like *poṟṟāmara* (*poṉ + tāmara*) and *poṟṟār* (*poṉ + tār*); but illustrations are vey rare indeed in the texts." (See *PMP*, IV, D, 4).

The inscriptions do not show the change after the 11th cent. The following instances embody the change:

10th: *patiṉṟūṇippāṭu* (4-26[3]), *poṉṟaṉṭam* (4-52[3]) (cf. *poṉ taṉṭappaṭuvitu*, 9-2[3]), *koṭuttavaṉṟaṉ mutal* (6-70).
11th: *poṉṟaṉṭam* (6-20[2]) vf. *poṉ taṉtam*, 8-4).

Instances like *Ceṅṅaṅ-Tāyaṉ* (11: 7-1), *Kaṉṉaṅ-Tevan* (12: 2-91), occurring in the inscriptions show the assimilalion of *ṉ*, on meeting *t*, to *ṅ*, homorganic with *t*.

-*ḷ* + *k*-, *p*-, *c*-:

Līl, III, 20, prescribes the doubling of the plosives following (*yaralaḷaḷebhyaḥ kacatapānām dvitvam*). In the tenth and eleventh centuries a few instances are met with embodying the Tamil change of *ḷ* > *ṭ* (cf. *PMP*, IV, D, 5), but side by side with these also occur instances without the change and showing the doubling of the plosives following.

(i) -*ḷ* > *ṭ*:

10th: *uṭpaṭa* (2-7[3]) (cf. *uḷ-p-paṭa*, 2-10[3]), *tiṅkaṭ-paṅṅiṟuṅāḷi* (5-9), *kaṉkāṇi-kāṭṭumavarkaṭk-iṭṭa* (5-14), *perumāṉaṭikaṭk-* (6-51) (cf. *perumāṉaṭi-kaḷkku*, 11: 7-3).
11th: *ṅāṭuvāḷumavakaṭkku* (2-5).

(ii) Instances without the change (but with doubling of plosive):

10th: ....*yāṉtuḷ-c-cellāṅiṉṟa* (1-2), *uḷ-p-paṭa* (2-10[3]), *āḷ-k-kācu* (2-29).
11th: *ñātikaḷkku*, *yōkikaḷkku* (6-18/19), *perumāṉaṭikaḷkku* (7-3), *tiruṅāḷ-k-kaṇattār*.
12th: *ceṉṟaṅāḷ-c-ceyta* (6-1).

-*ṇ* + *k*-, *p*-, *c*- :

Līl, III, 13, states that *ṇ* does not undergo any change when it meets *k*-, *c*-, *p*- (*ṉaṇayōḥ kacañapamayaveṣu na vikṛtiḥ*), and the commentary observes that instances of casal compounds) like *maṭkuṭam*, *maṭpāṉai*, are Tamil and not Malayāḷam.

The inscriptions do not have any instance representing this sandhi.

-*ḷ* + *t*-:

Līl, III, 20, lays down the doubling of the plosive after *ḷ*.

The earliest inscription studied here has one instance showing the Tamil change producing *ṭ* in the context:

Ayyaṉaṭikaṭiruvaṭi (1-3[2]) (cf. *Ayyaṉaṭikal tiruvaṭi*, 10: 2-4).

-ṇ + t-:

Līl, III, 14 (*ṇastasya ṭaḥ*), prescribes the Tamil change of *ṇṭ*. Apart from tradition-derived instances like *taṇṭār*, the change is not represented in Malayāḷam external sandhi at all, although in internal sandhi (as in *kaṇṭu*, 10: 2-5; < *kāṇ + t*) it occurs in Malayāḷam (and in other Dravidian dialects). (Cf. *PMP*, IV, D, 8; GL, p. 72).

The inscriptions show only one instance of this change:
10th: *eṇṭūṇi* (4-27).

-y, -r, -ḻ + k-, p-, c-, t-:

Līl, III, 20, lays down the Tamil rule of doubling the plosives following:

The inscriptions, generally speaking, show the doubling, as in *ūr-p-potuvāḷ* (12: 5-111), *kiḻ-c-Ciṟuveṟu* (12: 5-116), but instances like *vāriyaṉ-mār cīvitam* (12: 5-78) are also occasionally met with.

-m + k-, p-, c-, t-, y-, v-:

Līl, III, 17 and 19, prescribe the Tamil rules of assimilation of *-m* as a varga nasal to the plosive following in some (*alvaḻi*) contexts, and the elision *-m* and the doubling of the plosives following in others (viz. casal and some non-casal compounds) (17. *masya yathāyogam kādiṣu pañcamaḥ*; 19. *kvacil lōpaḥ*). (Cf. *PMP*, IV, D, 10).

The inscriptions follow the same rules, generally speaking:

(i) Examples showing the assimilation of *-m*:

10th: *iravucōṟuṅ-kuṭaṅāḻiyum* (1-10), *pārkkōluṅ-kappāṉum* (1-11), *ceppu-pattirañ-ceytu* (1-14), *piḻaikkuṅ-taḻiyār* (5-22), *tiruviḷakkuṅ-tiruvamir-tuṅ-tiruvakkiramuṅ -tiruccaṅṅaṇamuṅ-tiruppukaiyum* (8-1).

11th: *poṉṉuṅ-taṇṭappaṭuvitu* (1-4), *kaṇattāruñ-cāñticeyyumavaraḷuṅ-kaṇṭu-koḷvitu* (1-5).

12th: *ūrppotuvāḷuṅ-kūṭi* (1-52), *Kollaṅ-toṉṉṟi* (2-2), *kāriyañceyyiṉṟavara-ḷuṅ-kūṭi* (4-6).

13th: *Ceyyamaṇṇuṅ-Kalattūrum* (1-7), *ṅeyyuṅ-talaikkāṇamuṅ-tiruvallattu*, etc., (5-3).

(ii) Examples showing elision of *-m*, with the doubling of the plosive following:

11th: *ta-t-tamakku* (8-3).

12th: *puṟa-p-potuvāḷ* (3-130) (cf. *puṟam-potuvāl*, 5-260), *aka-p-potuvāḷ* (5-130).

(iii) In the following examples no change is represented:

10th: *ar̲iyum cātukkaḷ* (12-5), *Ūram-Kumaran̲* (12-6).
12th: *Māmpaḷḷam-pūmi* (4-14).

In *pūyamu-t-tecamiyum* (13th: 3-2), the *-m* is elided instead of changing it into a homorganic nasal.

-l, -n̲ + ń:

Līl, III, 28, refers to the production of *n̲* in this context (*lō n̲aḥ pañcameṣu*). "According to the literary Tamil rule, both in *vēr̲r̲umai* and in *alvaḻi*, when the first constituents are monosyllabic words with short vowels, *n̲n̲* is produced (involving, in the case of *-l + ń*, a twofold assimilation whereby the lateral *-l* is converted to a nasal *n̲* and the dental *ń* is changed to the alveolar *n̲*; and in *-n̲ + ń-* a single progressive assimilation of *ń* to *n̲*).

When the first constituents are monosyllabic words with long vowels embodied, or disyllabic words, then only a short alveolar *n̲* (simplified from *n̲n̲* on account of 'accent distribution') is produced."

(i) The following instances of these changes are met with in the inscriptions:

10th: *matin̲āyakan̲* (1-1), *ńān̲āḻi* (3-7), *cen̲n̲aṭai* (4-5), *Ceravan̲n̲āṭṭu* (4-84), *ńampińākaravāḻkkaiyān̲iyati* (5-2), *araiyiṭattān̲ālu* (5-11), *pūmiyān̲iyati* (5-14), *iṭaṅkaḻiyān̲āḻi* (5-15), *patin̲āḻi* (7-12), *makattin̲āḷ* (12-2).
11th: *kōn̲ōyin̲mai* (3-1), *Uttirattin̲āḷ* (6-3), *mun̲n̲ān̲āḻi* (6-4), *patin̲āḻi* (8-1).
12th: *Kaṭamn̲n̲āṭṭu* (7-48), *mun̲n̲āḻicce* (4-24), *patin̲āḻi* (4-26), *muppatin̲āḻi* (5-41), *ńān̲āḻi* (5-59), *Maṭaiyān̲āḻi* (5-193).
13th: *ńān̲āḻi* (1-5).

(ii) By the end of the Early Old Malayāḷam period these sandhi changes appear to have fallen into disuse except in a few instances like *ńān̲āḻi* (which have continued to the present day).

Examples without change:

10th: *iraṭṭaiyāl ńān̲āḻi* (7-9), (cf. *iṭaṅaḻiyān̲āḻi*, 10: 5-15), *Marutar̲aikkoṭṭāl-ń-ńel* (5-137).
13th: *ńiccal-ńaṭa* (1-6[2]), *Kaṇṇaṅńeṭi* (2-3).

-ḷ, -ṇ + ń-:

Līl, III, 15 and 16 together envisage the change into *ṇṇ* in this context (*ḷō nō ṅe; nō ṅō ṇaḥ*); while III, 21 refers to the simplification of *ṇṇ* to *ṇ*

when the first constituent of the compound is a disyllabic or polysyllabic word, or a monosyllabic word, with a long vowel (*dīrghāṇṇō nē lōpaḥ*). (Cf. *GL*, pp. 72 and 74).

"In literary Tamil both in *vēṟṟumai* and in *alvaḻi* *ṇṇ* is the resultant when the first constituents are monosyllabic with short vowels, while *ṇṇ* appears shortened as *ṇ* when the first constituents are monosyllabic with long vowels, or are disyllabic."

The inscriptions show only the crystallised compounds *eṇṇūṟu* (11: 6-28), *eṇṇa* (12: 5-58) and *eṇṇāḻi* (5-101) which are still current in Malayāḷam.

-*l*, -*ḷ* + *m*-:

"*l* and *ḷ* are changed to -*ṉ* and -*ṇ* respectively according to the literary Tamil rule."

The inscriptions do not show the change of -*l* + -*m* > *ṉ* (cf. 10th: *koyil-māṉiṭam*), but instances are available for the change of -*ḷ* + *m*- > *ṇ*:

10th: *kārāṇma* (7-), *ūrāṇmaikku* (1-1).

12th: *potuvāṇmār* (5-253), *aṭikaṇmārkkum* (5-271).

It may however be noted here that Mal. does show the change of -*l* + *m*- > *ṉ* in a few instances (some of which are still current) like *ńaṉma* (cf. *PMP*, IV, D, 13, iii).

-*m* + *ń*-:

Līl, III, 18 (*nē naḥ*), refers to the regressive assimilation of *m* to *ń* as in some Tamil literary contexts, but it does not make mention of the elision of -*m*, which is the Tamil practice in some other contexts (viz. *vēṟṟumai* and *alvaḻi*). (Cf. *PMP*, IV, D, 14).

The assimilation of *m* to *ń* is numerously represented in the inscriptions, which rarely show also the elision of -*m*.

10th: *Kaliyukańńāläyirattu* (5-26), *Viyāḻań-ńiṉṟa* (7-3), *kalańńel* (11-13) etc.

11th: *Viyāḻń-ńiṉṟa* (3-2), *kalań-ńel* (3-3), etc.

12th: *kalań-ńel* (1-18), *ceń-ńel* (2-82), *iraṇṭāń-ńāḷ* (5-262), *vēṇṭuń-ńel* (6-5), etc.

13th: *Viyāḻań-ńiṉṟa* (5-1), *koḷḷuń-ńel* (5-2), etc.

(i) Elision of *-m* is represented in the following:

12th: *muppattaṟu-kala-ṅel* (1-72), *koḷḷu-ṅel* (5-7).

-m + *m-*:

"In Tamil literary sandhi, *-m* is elided, generally speaking."

The inscriptions rarely show this elision, as in: *Veṅkāvaṉūru Māṭamaṇṇum* (*Māṟṟalum Maḷaiyyaṉūrum*, etc.) (10: 5-6).

ḻ + *n-*:

Līl, III, 21, comm. refers to the production of *ṇ* in this context but hesitates to approve of it apparently because the Old Tamil grammar *Tolkāppiyam* does not prescribe it. The change to *ṇ* itself appears to be a feature of Middle Tamil; for Old Tamil does not show the change, though Middle Tamil texts and inscriptions have instances like *vāṇāḷ* (< *vāḻ ṅāḷ*) and *kīṇōkkiya* (*kīḻ ṅōkkiya*). (Cf. *PMP*, IV, D, 16). The Middle Tamil grammar *Vīracōḻiyam* adverts to the change in Sandhi, 18.

The inscriptions show this change only in the past stem *vāṇṇ-*[4] (12: 3-1).

4. *vāṇṇ-* < *vāḻṅṅ-* < *vāḻṅt-* < *vāḻ* + *ṅt* (the past tense affix). Cf. L. V. R. AIYAR, 'Dravidic Sandhi,' *QJMS*, 27. 256.

II

MORPHOLOGY

CHAPTER I

Noun Bases

1. *Nature of the bases found in the inscriptions.*

I. Primary bases or morpheme words :[1]

Examples (10th)[2]:—*kuṭi* (2-11), *ari* (5-2), *puḷi* (7-14), *kaṟi* (11-8), *carakku* (2-33), *uppu* (11-8), *yāṉṭu* (3-1), *viḷakku* (4-39), *ellai* (2-13), *piḻai* (2-47), *pukai* (8-1), *paṟai* (13-10), *tōṭṭam* (2-13), *kalam*[3] (3-2), *poṉ* (4-89), *ńey* (5-10), *matil* (2-12), *kaṭal* (2-13), *ńel* (11-14), *ńāḷ*.

II. Secondary bases:

A. Derived Secondary bases:

(i) Substantives from verbal bases by the addition of a suffix:

(a) Forms which resemble the primary bases:—*vilai* 'price' (2-19; < *vil-* 'to sell'), *oḻukkam* 'established rule or custom' (9-2; < *oḻuk-* 'to be arranged in regular order'), *aḷavu* 'measure' (10-3; < *aḷa* 'to measure'), *celavu* 'expense' (12-2; < *cel* 'to go').

1. Cf. Bloomfield, *Language*, 209. Many of these bases may be classed as action-nouns or verbal substantives (cf. Jesperson, *Philosophy of Grammar*, 136), by deriving them from the corresponding verb-bases: e.g., *viḷakku* '*lamp*' < *viḷakk-* 'to make clear, to illumine'; *kaṟi* 'a preparation of vegetables' < *kaṟi* 'to chew'. However, as this would involve going into such questions of word-origin as are outside the purview of this study (viz., questions as to whether the verbal use is earlier than the nominal, etc.), I have not attempted such a classification.

2. Since the categories of bases found in the 10th century inscriptions are representative of the other centuries also, a few examples from the 10th century alone are given here.

3. The final *-m* in this type of neuter may be considered as gender-denoter as well — See under 'Gender'.

(b) Forms which are usually termed 'verbal nouns':—*varattil* 'in coming' (2-30; < *var-* 'to come'), *pōkkil* 'in going out' (2-30; < * *pōk-* 'to go'), *aruḷicceykai* 'order' (11: 3-4; < *aruḷiccey* 'to order').

(ii) Subtantives from existing noun bases (including attributive words):

vaṭṭakai 'dish' (7-46, < *vaṭṭam* 'a circle'), *veḷḷi* 'silver' (7-44; < *veḷ* 'white'), *paḷḷiyār* 'men of the church', i.e. church authorities' (2-18; < *paḷḷi* 'church'), *talaiyār* 'elders' or 'leaders' (2-49; < *talai* 'head'), *sabhaiyār* 'members of the council' (4-56; < *sabhai* '*council*'), *taḷiyār* 'people of the *taḷi*' (5-23; < *taḷi* 'an ancient political division'), *atikārar* 'those in authority' (5-23; < *atikāram* 'power').

(iii) Substantives from numerals:

eṇmar (1-7), *pańńiruvar* (1-7), *aivar* (2-2), *iruvar* (4-48).

(iv) Substantives from verbal participles:
koṭuttavaṉ (6-69), *mūttavaṉ* (9-2), *ńīrērēṟṟār* (2-48), *mūttōr* (9-2), *amaiń-cavai* (6-42), *uḷuvār* (4-49), *vilakkuvār* (4-49), *muṭṭikkumavaṉ* (12-7), *pāṭutāńkumavaṉ* (13-16).

B. *Compound bases*:

(i) Noun and noun:

mēṉi-p-poṉ (1-9), *poli-p-poṉ* (1-9), *iravu-cōṟu* (1-10), *pār-k-kōl* (1-10), *kōyil-atikāri* (2-6), *ńīr-t-tuḷḷi* (2-7), *mulai-vilai* (2-18), *purai-y-iṭam* (4-33), *kai-k-kūli* (6-83), *tēńkāy* (7-14; < *teńku* + *kāy*), *eṇṇai* (10-7; *eḷ* + *ńey*).

(ii) Adjectival form (including substantival and participial adjectives) and noun — the compound sometimes showing semantic extension: *ceppupattiram* (-14; *cempu* '*copper*' + *pattiram* 'leaf' or 'plate', the compound meaning 'a copper-plate grant'), *iḷań-kūṟu* (2-8), *añcu-vaṇṇam.* 'five castes' (2-21), *cem-poṉ* 'superior gold' (5-24; *cem* 'red or excellent'), *ńiccańaṭai* 'daily expenses in temple service, according to usage' (6-60; < *ńiccam* 'daily' *ńaṭai* 'custom or usage'), *Mūḻikkaḷatt-oḻukkam* 'the agreement of *Mūḻikkaḷam*' (9-2), *ańti-t-tiruvamirtu* ('night offerings' (10-5), *cuṟṟu-viḷakku* 'lamps placed around a shrine' 12-3; (lit. 'circle-lamp'), *pańtīr-aṭi* 'the worship conducted at twelve feet time' (lit. 'twelve-feet'), *mukkāl-vaṭṭam*[4] 'a temple' (13-12; lit. 'three-fourths circle').

4. "This term is used, mostly in west coast inscriptions, to denote a temple without any reference to the deity enshrined therein. It might have been so called from the nature of the temple which was mostly circular, a fourth part being utilised for the entrance and *dvārapālakās*." (*TAS*, 4. 8.)

(iii) Verb and noun:
viṭu-pēṟu 'absolute possession' (2-28; *viṭu* 'to leave', *pēṟu* 'that which has been obtained or got possession of'; cf. *TAS*, 65), *aṭṭi-p-pēṟu* 'absolute possession' (2-44), *kuttu-ñel* 'pounding paddy' (as distinguished from 'seed paddy' or *vittu*) (7-13; *kuttu* 'to pound') *ceṉṉaṭai* 'daily expenditure in temple service' (6-65; < *cel* 'that which is prescribed or established' + *ñaṭai* 'temple'—cf. *TAS*, 4-8).

(iv) Negative verbal participle and noun:
ñantā-viḷakku 'perpetual lamp' (12-3, lit. the lamp which does not go out or perish), *muṭṭā-viḷakku* (5-7).

The following features of the nominal bases occurring in the inscriptions are noteworthy:—

(i) The bases in the earlier inscriptions do not end in *-a* like some bases in the later (12th century) inscriptions.[5] For example, the earlier (10th century) inscriptions have only the form *paṟai*, whereas the later inscriptions have *paṟa* side by side with *paṟai*, (See under Phonology).

(ii) The bases in the earlier inscriptions do not embody the enunciative -ə (symbolised in the inscriptions by the addition to the usual consonantal finals the sign for *-u*).[6] The post-tenth century inscriptions have a few instances of forms embodying the enunciative, as in Modern Malayāḷam: *peṇṇu* (11: 8-5), *viḷāvu* (12: 5-33), *Aruñaṉṉūru* (12: 5-84), *ñellu* (12: 5-198).

(iii) The dropping of the final syllable of *arici* and *paṟicu*, probably due to the change of the intervocal *-c-* to *-y-* is reflected in the tenth century inscriptions, but the phenomenon becomes more frequent in the later inscriptions.

III. Indo-Aryan loanwords:

The inscriptions contain a large number of Indo-Aryan loanwords,[7] borrowed into the Tam.-Mal. group either directly from Sanskrit or from

5. Cf. *EMM*, p. 5. From the illustrations *kutira, kaḷuta* in *L*, I, 1, *comm.*, it is clear that the forms with final *-a* had become a permanent feature of Mal. by the close of the Early Old Malayāḷam period. See also *L*, III, 1.

6. This practice seems to have struck such deep roots even during the Early Old Malayāḷam period that *Līlātilakam*, the fourteenth century Malayāḷam grammar gives literary recognition to it in the commentaries to the *sūtras* 4 and 12 of the third *śilpa* (cf. *CL*, pp. 65 and 70) and in *sūtra* 24 of the same *śilpa* ('*hṛasvāl lalananāṇām dvitvam*'). See *EMM*, pp. 5 and 6.

7. It is interesting to note that many common objects and actions are referred to in the inscriptions with loanwords, as in modern Malayāḷam (cf. GODAVARMA, *Indo-Aryan loan-words in Malayāḷam*, 7-8). Exs., *pura* 'house' (< Skt. pura), *nāḷi* 'a measure' (< Skt. *nāḍi*), *kañci* 'rice gruel' (< Pkt. kañjia), *vaṭṭam* 'a circle' (< Pkt. vaṭṭa), *irakṣikka* 'to protect' (< Skt. rakṣ-), *ārātikka* 'to worship' (< Skt. *ārādh-*), etc.

Prakrits (including Pāli).[8] Needless to say, these 'cultural borrowings' (cf. BLOOMFIELD, *Language*, p. 444) must have taken place at different periods, and, being loanwords, they show the phenomenon of 'phonetic substitution'[9] (cf. ibid., p. 445). Grammatically, the borrowed forms are subjected to the same rules as the native forms.[10]

The Indo-Aryan loanwords may be divided into two groups: (i) those which do not show any structural changes (the so-called *tatsamas*) and (ii) those which have been adapted to suit the phonetic structure of the Tam.-Mal. group (the so-called *tadbhavas*).[11]

1. *Borrowals without any changes, or 'tatsamas':*

(i) Forms which contain only such phonemes as have equivalents in Early Old Malayāḷam: Examples[12]:—

ṅāyaka (1-17), *Nārāyaṇaṉ* (5-12), *pati* (1-5), *Rāmaṉ* (7-4), *Tulām* (as in *Tulāttuḷ*; 13-12).

(ii) Forms containing non-Dravidian phonemes which are represented by Grantha symbols:

bhūmi (2-6), *prakṛti* (2-9), *svāmi* (2-33), *sabhai* (3-1), *ṅivedyam* (4-45), *agram* (4-45), *vyavastai* (4-50), *saṅtati* (4-51), *śrī* (6-28), *Paramēśvaraṉ* (7-23).

8. The commentarian Teyavaccilaiyār, while giving examples of *vaṭaveḻuttu* mentioned in *TC*, 401, rightly mentions words borrowed from Prakrits also, unlike Cēṉāvariyar and Naccinārkkiṉiyar who mention only words borrowed from Skt. (Cf. P. S. S. SASTRI, *Tolkāppiyam Collatikāram*, p. 249).

9. The modifications of the IA loanwords represented in the inscriptions may have been due partly to the alterations of the foreign forms to meet the fundamental phonetic habits of the Tamil-Malayāḷam group (cf. BLOOMFIELD, *Language*, p. 446), and partly due to the lack of symbols in the Vaṭṭeḻuttu and the Tamil scripts (in which the inscriptions are written) for the voiced variety of the consonants and the sibilants. These modifications are effected according to certain definite conventions which have been current in Tamil from its earliest known literary period, and which have been referred to by *TC*, 402).

10. Cf. K. GODAVARMA, op. cit., p. 137. This is the general practice with all borrowals in a language; see BLOOMFIELD, op. cit., p. 453.

11. The *tatsamas* comprehend borrowals made (without changes) of OIA words at different periods, while the *tadbhavas* are constituted of words borrowed at different periods from OIA with changes, and MIA with or without changes. "While Malayāḷam in the course of its history has gone on borrowing *tatsamas* from OIA, the MIA elements of Malayāḷam are mainly those which it has inherited from a common 'parent stage' which came under the influence of MIA speeches (particularly of Buddhist and of Jains.)." See *GL*, p. 39.

12. Under each head, only a few examples from the 10th century are generally given, since these are representative of the IA loans found in the other centuries also.

2. *Borrowals with changes,*[13] *or 'tadbhavas':*

(i) With vocalic contraction:

Kumaraṉ (4-4; Skt. *kumāra*).

(ii) Forms in which voiced and/or aspirated consonants are replaced by the unvoiced and/or unaspirated variety of the same varga:

atikāram (5-2, Skt. *adhikāra*), *aṉupaṅtam* (9-2, Skt. *anubandha*), *Iṅteśvaraṅ-kōtai* (11-1; Skt. *Indeśvara-goda*), *kaṇapatiyār* (6-26; Skt. *gaṇapati*), *Kōviṅ taṉ* (12-6; *govinda*), *caṅtaṉam* (5-21; Skt. *candana*), *tēvar* (2-2; *deva*), *ṅaka-ram* (-48; Skt. *nagara*), *paṭṭārakar* (12-1; Skt. *bhaṭṭāraka*), *pali* (11-9; Skt. *bali*), *pūmi* (2-1; Skt. *bhūmi*), *maka-* (12-2; Skt. *maghā*), *maṇtapattil* (10-3; Skt. *maṇḍapa*), *Vicaiya-* (1-27; *vijaya*, Skt.), *tirumukam* (12: 4-18, Skt. *mukha*), *cōkiyar* (13: 5-6, Pkt. *jōgi;* Skt. *yogi*).

(iii) Forms with anaptytic vowels or those showing the phenomenon of epenthesis:

pirakiruti (1-4; Skt. *prakṛti*), *maṇikkirāmam* (1-4; Skt. *-grāma*), *caṅtirā-tittar* (1-20; Skt. *candrāditya*), *akkiram* (11-7; Skt. *agra*), *mātirukkaḷ* (6-23; Skt. *mātṛ-*), *ṅivettiya-* (10-4; Skt. *naivedya*), *Caṅtiracēkaraṉ* (7-6; *Candra-śekhara*), *amirtu* (8-1; Skt. *amṛta*), *kāriyam* (10-2; Skt. *kārya*), *karumam* (11-3; Skt. *karma*), *karuppuram* (11-6; *karpūra*), *Accuvati* (13-3; Skt. *Aśvinī*).

(iv) Forms showing the reduction of an initial conjunct consonant (and phonetic substitution):

Tāṇu-Iravi (1-1; Skt. *sthāṇu*), *ceṭṭiyār* (4-84; Pkt. *seṭṭhi;* Skt. *śrēṣṭhin*), *taḷi* (7-5; *sthḷī*).

(v) Forms with a prothetic vowel:

Irāmaṉ (2-17; Skt. *Rāma*), (*irakṣikka*, 2-22, *ilakkikka*, 1-25; Skt. *rakṣ-*), *Iravi* (1-1; Skt. *Ravi*), *Iyakkaṉ* (7-23; Skt. *yakṣa*), *ulaku* (2-15; Skt. *lōka*).

(vi) Forms showing the elision of one or more syllables (involving the phenomena of syncope and apocope) with compensatory vowel lengthening:

Cēṅtaṉ (12-2; Skt. *Jayanta*), *Kōttaṉ* (12-5; Skt. *Gōvarddhana*), *mātēvarkku* (7-1; Skt. *mahādeva*), *pañcamāśabdam* (11: 7-2; Skt. *pañcamahāśabda*).

13. The changes are described here with reference to Sanskrit. It is important to bear in mind that many of these *tadbhavas* may be direct borrowals with or without change from MIA.

(vii) Forms showing the phenomenon of aphaeresis:

āvaṉi (3-2; Skt. *śrāvaṇa*), *ēṇi* (1-8, Pkt. *sēṇi;* Skt. *śrēṇi*), *ulku* (2-32; *śulka*, Skt., cf. Pkt. *sukka*).

(viii) Forms showing the phenomenon of assimilation (both progressive and regressive):

vaṇṇam (1-4; Pkt. *vaṇṇa*, Skt. *varṇa*), *Kaṇṇaṉ* (12-2; Pkt. *Kaṇha*) Skt. *Kṛṣṇa*), *Kaṉṉi* (7-2; Pkt. *Kannā;* Skt. *Kanya*), *Iyakkaṉ* (7-23; Skt. *yakṣa*).

(ix) Sibilants and the aspirate show the following changes:

ś > c: *Caṅkaṉ* (12-6; Skt. *Śaṅkara*), *Caṉi* (12: 5-1; Skt. *Śani*).

ṣ > *ṭ*: *viṭu* (5-19; Skt. *viṣu*), *paraṭai* (7-8; Skt. *pariṣat*), *Kiriṭṭaṉ* (9-1; Skt. *Kṛṣṇa*), *Mēṭam* (13: 4-3; Skt. *Mēṣa*), *māṉiṭam* (11: 1-4; Skt. *manuṣya*).

ṣ > *ḷ*: (probably through *ṭ*[14]): *puruḷar* (11: 6-14; Skt. *Puruṣa*), *maṉuḷiccam* (12: 6-3; cf. *māṉiṭam*, 11: 1-4; Skt. *manuṣya*).

s > c: *Cuṅtaraṉ* (1-27; Skt. *sundara*), *cātukkaḷ* (12-5; Skt. *sādhu*).
s > *t*: *Vātutēvaṉ* (12-5; Skt. *Vāsudeva*).
h > *k*: *makākāḷam* (11: 5-10; Skt. *mahākāḷa*).
h > *y*: *vāyiṉam* (2-30; Skt. *vāhana*).

(x) The following are the important phonological changes which the loanwords undergo along with native words:

k > *y*: *Kārttiyai* (7-15; Skt. *kṛtttikā*).
ṅk > *ṅṅ*: *Maṅṅalattu* (9-1; Skt. *maṅgala*), *Caṅṅaraṉ* (13-22; Skt. *Śaṅkara*).
ṭ (*ḍ*) > *ḷ*: *nāḷi* (3-3, etc.; Skt. *nāḍī*), *bhaḷārar* (12: 8-8; cf. *paṭārar*, 10: 11-13; Skt. *bhāṭṭāraka*).

t > c: *Āticcaṉ* (13-5; Skt. *āditya*).
ṅt (*nd*) > *ṅṅ*: *caṅṅaṇam* (8-1), *Cēṅṅaṉ* (8-1) (Cf. Skt. *candana* and *Jayanta*).

Cēṅṅaṉ (8-1) (Cf. Skt. *candana* and *Jayanta*).
p > *v*: *Kaṇavati* (5-10; Skt. *gaṇapati*), *Paraṅtavaṉ* (13-24; Skt. *parantapa*), *tavai* (11: 8-4; Skt. *sabhā*).

r > *ṟ*: *Kaṟkaṭaka* (12-2; Skt. *karkaṭaka*).

14. Cf. *viḻuvu* (12: 5-259), *viṭu* (10: 5-19); Skt. *viṣu*. IA *ṭ* is found to change to *ḷ*; e.g. *bhaḷārar* (12: 8-8); Skt. *bhaṭṭāraka*.

2. *Gender*

Early Old Malayāḷam, like the other south Dravidian languages, distinguishes three genders, viz., masculine, feminine and neuter, in the third person singular of the nominal bases. The gender suffixes met with in the inscriptions are :—

Masc.	10th:	(*a*) ṉ, (*ā*) ṉ, (*ō*) ṉ.
	11th:	(*a*) ṉ, (*ā*) ṉ.
	12th:	(*a*) ṉ, (*ā*) ṉ.
	13th:	(*a*) ṉ, (*ā*) ṉ.
Fem.	10th:	*ammai*,[15] *-tti* (*-āḷ* of 3rd sg. verb finite).
	13th:	*ammai*, *-cci*.
Neut.	10th:	(*a*) *m*, (*-tu* of dem. pronoun).
	11th:	(*a*) *m*, (*-tu* -do-).
	12th:	(*a*) *m*, (*-tu* -do-).
	13th:	(*a*) *m*, (*-tu* -do-).

In Old Malayāḷam, as in New, only 'rationals' have, generally speaking, gender differentiation. Non-rationals are all regarded as neuter. These are, however, occasionally personified and given the appropriate gender suffixes[16] (cf. *Līl.*, II, 18, comm.; *GML*, p. 22); e.g., the masc. form *viyāḷaṉ* 'the planet jupiter', beside its neuter form *viyāḷam*.

CALDWELL thinks that the masculine, feminine and epicene suffixes which form the terminations of Dravidian 'high caste' nouns are properly fragments of pronouns or demonstratives of the third person, as are also most of the neuter formatives.[17] On the basis of this assumption he suggests that all primitive Dravidian nouns are destitute of gender. In support of his view he cites the ancient Tamil habit of occasionally discarding gender suffixes in poetry as well as the obsolete Kannaḍa-Malayāḷam practice of using the word *paital* 'child' with the prefix *āṇ* or *peṇ* as the case may be. Needless to say, this is a very large assumption and in the present state of

15. *ammai* (the word-morpheme meaning 'mother') may be considered as an honorofic gender suffix for the feminine in forms like *Umai-ƒ-ammai* (10: 13-9).

16. GAI has rightly pointed out in his *Historical Grammar of Old Kannada* (p. 21) that K. V. SUBBAYYA's generalisation (*A Comparative Grammar of Dravidian languages*, IA, 40, 18,), namely, in all the Dravidian languages gender follows sex is untenable, in view of the fact that animals are all brought under the neuter gender. In a general way, it is true (as BLOCH observes in his *Structure grammaticale des langues dravidennes*, p. 5), the distinction of gender in Dravidian corresponds neither to sex, nor to animate and inanimate distinction, nor to any other possible classification of objects. Gender differentiation in Dravidian seems to be based more upon subjective psychological feeling of superiority and inferiority (cf. *Tolkāppiyam's* division of objects into *uyartiṇai* and *ahriṇai*) then upon any criterion applicable to the physique.

17. *Comparative Grammar*, pp. 117-18.

our knowledge there is little or no evidence to support it. The Tamil habit of occasionally doing away with gender suffixes cannot by itself prove much, and instances like *iṟai for iṟaiaṉ* may even be viewed as a purely poetic device to suit metrical exigencies. And there is little point in the example of the Kannaḍa-Malayāḷam habit of using the word *paital* with a prefix to indicate gender, for the term *paital* is a common-sex word like the English *child, author, singer*, etc. (cf. JESPERSEN, *Philosophy of Grammar*, p. 232).

CALDWELL's theory that it is by adding fragments of pronouns that gender is expressed in Dravidian is untenable at least in regard to the Tamil-Malayāḷam group in view of the clear statement found in *Tolkāppiyam* (*Collatikāram*, sūtra 5), oldest Tamil grammar, and *Līlātilakam* (II, 18), the fourteenth century Malayāḷam grammar, to the effect that *-ṉ* is the masc. sg. suffix (and not *-āṉ*). (Cf. HGT, p. 123).

A. R. Rajaraja VARMA (*Kēraḷapāṇinīyam*, pp. 158-160) derives *-aṉ* from *āṉ*, (*-aḷ* of the pronoun *avaḷ* from *āḷ*), *-i* from Skt. *-ī*, and thinks that *-ti* (*-tti*) (which is sometimes palatalised into *-cci* in the neighbourhood of a palatal phoneme) is a native Dravidian, following CALDWELL. But, as L. V. Ramaswami AIYAR observes,[18] the derivations of *-aṉ* and *-aḷ* from *āṉ* and *āḷ* cannot be supported, while the feminine-denoting *-tti* is very probably adapted from MIA *(i)tti*, derived from Skt. *strī*.

According to CALDWELL *-am* is not neuter gender denoter but is merely a formative. He holds the view that 'every Dravidian noun is naturally neuter, or destitute of gender, and it becomes masculine or feminine solely in virtue of the addition of a masculine or feminine suffix.' (See CGD, p. 126). Rajaraja VARMA thinks that *-am* is a neuter-denoting affix and attempts to derive it from *-aṉ* (cf. *Kēraḷapāṇinīyam*, pp. 157-8). GODA VARMA also is inclined to think that *-aṉ* and *-āṉ* were originally appended to masculine and neuter stems alike.[19] It is, however, very probable that the masculine denoting *-aṉ* came to be applied to neuters like *kāḷaṉ, kūmaṉ*, etc. by way of a gentle personification as in the case of *Viyāḷaṉ* (cf. *Līl.*, II, 18, comm.).

Līlātilakam on Malayāḷam 'gender':[20]

Sūtra 15 of the second *śilpa* of *Līlātilakam* mentions the three genders: masculine, feminine and neuter (*strīpunnapuṃsakaṃ trikam*).

18. "Notes on Kēraḷapāṇinīyam", *The Maharaja's College Magazine*, (Ernakulam 20, No. 1 (September 1937); see also *GL*, p. 52.

19. *Indo-Aryan Loan-words in Malayāḷam*, p. 141.

20. The following is practically a quotation from L. V. R. AIYAR's *Grammar in Līlātilakam*, p. 53. See also: L. V. R. AIYAR, 'Līlātilakam on Malayāḷam Inflexions,' *QJMS*, 33. 133-34; John BROUGH, 'Līlātilaka: A Sanskrit tract on Malayāḷam Grammar and Poetics,' *BSOS*, 12. 154.

The next rule postulates that the feminine ending in words other than nouns is *-ḷ* (*striyāṃ anāmni ḷō 'nte*).

The commentary on sūtra 16 specially points out that the determination of gender in Mal. is guided by sex, and not by grammatical rules (*'atra stryādikaṃ liṅgaṃ laukikaṃ, na pāribhāṣikam'*).

Sūtra 17 mentions that *-i* is the feminine affix for the conversion of nouns denoting caste, or of masculines (*'iśca jātipuṃyōgayōḥ'*). The commentary gives the illustrations *ceṭṭicci* and *śūdratti*. (L. V. Ramaswami Aiyar observes that, so far as these illustrations are concerned, the original feminine denoter may have been a Prakritic *-tti* (OIA *-strī*), noting, however, that Malayāḷam has *-i* as feminine converter in instances like *tōḻi, kiḻavi*.

Sūtra 18 says that *-ṉ* is the masculine singular ending, generally speaking (*'puṃsi naḥ'*). The commentary explains forms like *tēṉaṉ, puḷiyaṉ* (used as neuters) as being due to masculinity being attributed to them (*'puṃstvādhyārōpāt*).

Sūtra 19 envisages neuter singular *-am* (*'napuṃsaka mō 'dante'*); and the next sūtra refers to the neuter singular ending *-t* of the demonstratives *at(u)*, *it(u)*, and of the interrogative *ēt(u)* (*a-i-ēbhyas ta ca*).

(i) *Stems without gender suffix: Examples:*—

Masc.

10th: *Irāma-tiruvaṭi* (2-17), *svāmi* (2-33), *Puṉṉaittalai-pati* (2-42), *Sapīr-Iśo* (2-50), *Nampi* (4-47), *perumāḷ* (4-53), *potuvāḷ* (6-10), *Kīrtti-Eṉāti* (7-5), *Iravi-Kōtai* (12-6), *Śrīvallabhaṅkōtati* (13-7).

11th: *Iravi-kaṇṇi* (3-5), *Vīrakuṟumpuṟai* (6-18), *Āticcaṅ-kōtai* (8-5), *potuvāḷ* (1-3).

12th: *kuṭipati* (1-55), *Utaiyamārttāṇṭavarmma-tiruvaṭi* (3-1), *potuvāḷ* (1-35).

13th: *Vīrakēraḷa-tiruvaṭi* (2-3), *Kaṇṭaṅ-Ñeṭi* (2-3), *Irāmaṉ-Īravi* (4-14).

Neut.

10th: *ṅāḻi* (3-3), *pāti* (4-23), *miḻi* (4-29), *poṟi* (4-40), *tūṇi* (4-40), *cāṇti* (4-46), *pali* (4-46), *ari* (5-2), *cēri* (5-5), *oṭi* (7-10), *puḷi* (7-14), *toṭi* (9-1), *pari* (10-2), *kaṟi* (11-8), *kañci* (12-2), *Accuvati* (13-3), *ulaku* (2-15), *pūmi* (2-36), *yāṇṭu* (3-1), *viḷakku* (4-39), *paṭaku* (5-4), *vittu* (7-13), *uppu* (11-8), *iṭaiyiṭu* (13-12), *ellai* (2-13), *vaṭṭakai* (7-46), *eṇṇai* (10-7), *paṟai* (13-10), *ṅaṭai* (13-15), *ṅey* (5-10), *tēṅkāy* (7-14),

ñāyir (13-2), *kāyil* (2-11), *matil* (2-12), *kaṭal* (2-13), *kōyil* (2-37), *ńel* (5-1), *ńāḷ* (2-16).

11th: *ari* (6-4), *ulaku* (5-14), *eḻuttu* (5-28), *Mīṉañāyiṟu* (6-2), *paricu* (7-2), *ūṇ* (8-5), *cērikkāl* (6-18), *nāḷ* (7-2), *poṉ* (3-3).

12th: *tirukkoṭikkūṟa* (5-53), *kuṭa* (5-54), *eṇṇa* (5-58), *veṟṟila* (5-59), *aṭaikkā* (5-45), *paḷukkā* (5-59), *ńāḻi* (2-70), *piracatti* (5-4), *aṟi* (5-51), *virutti* (5-106), *kokkaruṇṇi* (5-142), *pūmi* (5-167), *uruḷi* (8-38), *kaiyeḻuttu* (2-134), *uppu* (5-192), *ellai* (4-8), *veṟṟilai* (5-44), *poṉ* (5-265), *ńey* (5-35), *ńel* (2-88), *pāl* (5-50), *ńūl* (5-51).

13th: *Tecami* (3-2), *ari* (5-4), *yāṇṭu* (1-1), *amirtu* (1-9), *pacceppaiṟu* (2-2), *uṭampu* (4-4), *eḻuttu* (4-9), *ńel* (5-2), *ńāḷ* (4-2), *tiṅkaḷ* (4-4).

(ii) Stems with gender suffix:[21] Examples:—

Masc. *-aṉ*:

10th: *Cēntañ-caṅkaraṉ* (3-2), *kaṭmpaṉ-kumaraṉ* (4-4), *peruńtaccaṉ* (4-66), *ūrāḷaṉ* (6-89), *Nārāyaṇaṉ-Caṅtiracēkaraṉ* (7-6), *kaṭaviyaṉ* (7-44), *uḷpāṭaṉ* (11-18), *pāṭṭamāḷaṉ* (12-4), *perumutiyaṉ* (12-7).

11th: *Kōvarttaṉa-mārttāṇṭaṉ* (1-1), *ńāyaṉ* (6-7), *tāḻiviyaṉ* (6-16), *iṭaiyiṭaṉ* (8-4), *kaṭaviyaṉ* (8-5), *atikāraṉ* (6-22).

12th: *Irāmaṉ-Tāyaṉ* (1-47), *Nārāyaṇaṉ-Ńārāyaṇaṉ* (1-49), *Kaṇṇaṉtēvaṉ* (2-91), *kuṇavāriyaṉ* (2-109), *camñcitaṉ* (8-8), *uvaccaṉ* (8-35).

13th: *camañcitaṉ* (1-2), *Vīra-Irāmaṉ* (1-3), *Pallavaraiyaṉ* (1-4).

-āṉ:

10th: *Emperumāṉ* (10-3).
11th: *kaṇattāṉ* (8-5).
12th: *ńāṭuvāḷkkaiyāṉ* (2-48).

-ōṉ:

10th: *kaṭaviyōṉ* (4-58).

Neut. with masc. ending:

10th: *Viyāḷaṉ* (7-3).
11th: *Viyāḷaṉ* (3-2), *Putaṉ* (6-3).
12th: *Viyāḷaṉ* (3-1).
13th: *Viyāḷaṉ* (1-1).

21. Since no distinction is made between native and loan-words in adding the gender and number suffixes, the loan-words are not separately indicated here.

Fem. *-ammai*:

10th: *Āticcaṉ-Umaiyammai* (13-19).
13th: *Irāmaṉ-Umaiyammai* (3-3).

-tti (*-cci*):

10th: *tamperumāṭṭi*[22] (11-7).
13th: *tēvaṭicci* (4-6).

Neut. *-am*:

10th: *tōṭṭam* (2-13), *kāriyam* (2-33), *karumam* (2-49), *kaccam* (3-2), *kalam* (4-9), *pāṭṭam* (4-44), *cīvitam* (5-1), *kāṇam* (5-15), *tāḻam* (7-45), *caṅṅaṇm* (8-1), *kaliyukam* (8-1), *akkiram* (12-2), *taṇṭam* (13-5), *mukkālvaṭṭam* (13-17), *puraiyiṭam* (4-36).

11th: *tōṭṭam* (2-13), *kaccam* (3-2), *pirasātam* (5-6), *kāriyam* (6-3), *tālam* (7-45), *karumam* (8-1), *mukkālvaṭṭam* (13-17).

12th: *mārkkam* (1-72), *Viyāḻam* (2-7), *ōlaikkaraṇam* (4-7), *ṅilam* (5-101), *paṭakāram* (5-205), *taṇṭam* (6-6).

13th: *veñcaṉam* (1-5), *ōlaikkaraṇam* (2-1), *Viyāḻam* (3-2), *Pūyam* (3-2), *pīṭam* (4-4), *kāriyam* (5-1).

Mas. with neut. ending:

10th: *kōyilmāṉiṭam* (6-71) (*māṉiṭam* < Skt. *manuṣyaḥ*—masc).

Fem. with neut. ending:

13th: *Uṇṇikaḷattiram* (4-6), (*kaḷattiram* < Skt. *kaḷatram*—neut).

3. *Number*

As in the other Dravidian languages, Malayāḷam has only two numbers: singular and plural. The stem itself or the stem with the gender suffix is used as singular, whereas the plural is formed by adding the pluralising particles to the stem.

The pluralising particles appearing in the inscriptions are:

10th: *-ar*, *-ār*, *-ōr*, *-mār*, *-kaḷ*.
11th: *-ar*, *-ār*, *-mār*, *-kaḷ*.
12th: *-ar*, *-ār*, *-mār*, *-kaḷ*.
13th: *-ar*, *-ār*.

22. Cf. *Kēraḷapāṇinīyam*, p. 153.

All the plural-forming suffixes met with in the inscriptions studied here are active in modern Malayāḷam, with the difference that they are often combined with the bases without regard to the sandhi rules represented in the inscription; for instance, modern Malayāḷam has only *potuvāḷmār* in the place of *potuvāṇmār* found in a twelfth century inscription (see under 'sandhi'). This disregard for the older sandhi rules seems to have become popular even in the oldest stage of Malayāḷam since the form *potuvāḷmār* is met with in the tenth century inscriptions.

The suffix *-kaḷ* is freely used to form 'rational' plurals, as in Early Middle Tamil (cf. *V, Veṟṟ.*, 2). This appears to have been a forward development common to the dialects of the Tamil-Malayāḷam group, since in Old Tamil the use of the plural ending *-kaḷ* was restricted to 'irrationals', and even here only optionally (cf. *TC*, 169 and 171).[23]

CALDWELL suggests that originally *-mar* or *mār* may have been used in the Tamil-Malayāḷam group instead of *-ār* as the ordinary pluralising particle of 'high-caste' nouns, and he attempts to trace *-mār* to *-var* (< *avar*).[24] Rajaraja VARMA also holds a similar view.[25] The inscriptional materials examined here do not lend any support to such a position. Further, it may be noted here that *-mār* is specially mentioned by *Tolkāppiyam* (*collatikāram, sūtra* 7).[26]

Līlātilakam on Malayāḷam 'number':

Sūtra 21 of the second *śilpa* states that there are two 'numbers': singular and plural, and the commentary explains that the base itself is used as the singular, with gender suffix (if any): exs., *avaḷ, avaṉ, atu, ṅampi, kavi, maram, vāḷ*.

Śūtra 22 mentions the plural suffixes as *-r, -kaḷ, -mār, -mar*, and *var*, generally speaking (*anekasmin -r, -kaḷ, mār, mar, -var, prāyeṇa*). The illustrations in the commentary for plurals are all 'rationals': *brāhmaṇar, kavikaḷ, ṅampimār, kāṇmar, kaḷvar, varumavar, avar*. The commentary observes: 'because of the use of the word '*prāyeṇa*' in the *sūtra, maraṅṅaḷ*, etc., might also be mentioned. Here, plurality also is associated with trees' ('*atra vṛkṣādīnāṃ bahutvamapigamyate*'). (L. V. R. AIYAR, thinks that the

23. See *EMM*, p. 29. See also the comments by P. S. Subrahmanya SASTRI in his edition (1945) of *Tolkāppiyam Collatikāram*, p. 154.
24. *CGD*, p. 137.
25. *Kēraḷapāṇiṇīyam*, p. 175.
26. Cf. L. V. R. AIYAR, 'Notes on Kēraḷapāṇiṇīyam', op. cit.

special statement 'plurality is also associated with trees' obliquely glances at the Tamil rule that for 'non-rationals' (like trees, for instance) the use of the plural *kaḷ*-ending is optional.) (Cf. *GL*, pp. 53-54).

Simple stem in the singular: Examples (10th):—[27]

(i) Without gender suffix:

Masc. *Irāma-tiruvaṭi* (2-13), *Sapīr-Iśō* (2-50), *perumāḷ* (6-10), *potuvāḷ* (6-10).

Fem. No examples.

Neut. *kuṭi* (2-11), *ṅāḻi* (3-3), *ari* (5-2), *viḷakku* (4-39), *ellai* (2-13), *piḻai* (2-47), *eṇṇai* (10-7), *paṟai* (13-10).

(ii) With gender suffix:

Masc. *ūrāḷaṉ* (6-89), *uḷpāṭaṉ* (11-18), *emperumāṉ* (10-3), *kaṭaviyoṉ* (4-58), *vaṇṇāṉ* (1-16), *Viyāḻaṉ* (7-3).

Fem. *Āticcaṉ-Umaiyammai* (13-19).

Neut. *tōṭṭam* (2-13), *kaccam* (3-2), *kalam* (4-9).

Plural.

Masc. and epicene:

-ar:

10th: *īḻavar* (1-17), *atikārar* (2-42), *kaṭavar* (3-6), *iruvar* (9-1), *ūrāḷ* (9-2), *iṭaiyiṭar* (13-14).
11th: *iṭaiyiṭar* (1-3), *veḷḷāḷar* (6-8), *puruḻar* (6-14), *ūrāḷar* (7-13).
12th: *Āriya-brāhmaṇar* (2-34), *kārāḷar* (2-99), *mūvar* (2-100), *cāmantar* (2-54), *atikārar* (6-2).
13th: *atikārar* (5-5).

-ār:

10th: *taḻiyār* (2-49), *pārpaṭṭār* (6-8), *ūrār* (9-1), *vaṇṇār* (1-12).
11th: *tirukkōyiluṭaiyār* (1-2), *kaṇattār* (1-5), *kūṟṟār* (2-4), *paraṭaiyār* (3-2), *ūrār* (7-1), *capaiyār* (7-1).

-ōr:

10th: *mūttōr* (9-2).

27. For examples from the 11th, 12th, and 13th centuries, see under 'Gender' and under 'Nominative singular'.

-mār:

10th: *aṭikaḷmār* (3-1), *potuvāḷmār* (13-13).
11th: *paraṭaimār* (8).
12th: *potuvāṇmār* (5-253), *piḷḷaimār* (5-258).

-kaḷ:

10th: *atikārikaḷ* (12-2), *cātukkaḷ* (12-5), *perumakkaḷ* (13-4).
11th: *uvaccakaḷ* (1-3).
12th: *perumakkaḷ* (4-20).

Double plural:

-arkaḷ, -avarkaḷ:

10th: *ṅāṭuvāḷumavarkaḷ* (12-4), *cārṅṅavarkaḷ* (12-5).
12th: *uvaccarkaḷ* (1-3), *vāriyamuṭaiyavarkaḷ* (5-22), *kāriyañceyyiṉṟavarkaḷ* (4-6).

Fem.

-ar:

10th: *Iḷakkaiyar* (1-7).

Neut.

(With the attribute of masculinity) *-ar:*

10th: *caṅtirātittiyar* (2-16).

-kaḷ:

10th: *kuṭikaḷ.*
11th: *kuṭikaḷ* (5-13).

Honorofic plural:

-ar:

Masc.
10th: *tēvar* (1-26), *Viyarāka-tēvar* (2-25), *paṭṭārakar* (12-1)
11th: *Pārkkaraṉ-Iravivarmmar* (5-2), *ṅāyar* (7-3), *vāriyar* (8-2).
12th: *Tirukkuṇavāta-tēvar* (2-102), *Brahmaprajñā-bhaṭārar* (7-5), *paṭṭārakar* (7-8).
13th: *brāhmaṇar* (1-5), *cōkiyar* (5-6).

-ār: Masc.

10th: *Cēṅṅaṉ-cēṅṅaṉār* (3-2,) *ceṭṭiyār* (4-84), *Kaṇapatiyār* (6-26), *Araṅkuṉṟappōḻaṉār*.
11th: *Kuṟumpuṟaiyār* (6-6).
12th: *piḷḷaiyār* (52-50).
13th: *piḷḷaiyār* (5-3).

Fem.

10th: *naṅkaiyār* (4-75), *tamperumāṭṭiyār* (11-7).
12th: *tāyār* (5-3).

-kaḷ:

11th: *Nelkuṉṟaṭikaḷ* (6-15).
12th: *Kulaicēkara-kōyilatikārikaḷ* (1-4), *cakkiravarttikaḷ* (2-16), *Vēṇāṭṭaṭikaḷ* (7-10).
13th: *Vēṇāṭṭaṭikaḷ* (1-3).

CHAPTER II

Nominal Inflections

Bases ending in *a, ā, i, u,* (ə), *ai, o, ṇ, y, r, l, ḷ, ḻ* and *ṉ* are found in the inscriptions under study. There are seven cases;[1] the nominative, accusative, instrumental, dative, ablative, genitive and locative, and there is only one declension for all these. The development of the characteristic Malayāḷam case terminations becomes almost complete by the close of the fourth century of the Kollam era; and though the inscriptions do not reflect all the developments, they show clearly enough the general line of evolution of the modern terminations.

1. *The Nominative Case*

The base itself with or without the gender suffix forms the nominative singular, and the nominative plural is formed by the addition of the pluralising particles to the base. (Since no distinction is made between native and loan-words in the declensions, just as in the addition of the gender and number suffixes, the loan-words are not separately shown in the following pages).

The nominative forms occur in the following syntatic positions:—

1. As stated in the Introduction, at the suggestion of Professor Z. S. Harris, I have attempted to state the syntactic character of word categories, with the exception of a few (such as the dative which is characterised by case suffixes) where such statements have not been considered necessary. It is indeed very desirable to give formal precedence to syntax in describing a language. The Indian grammarians of old, who were undoubtedly the pioneers of linguistic science, seem to have recognized the importance of this aspect of language study as well. For in *Tolkāppiyam,* the Tamil grammar which was written some time before the beginning of the Christian era, the chapters on syntax precede those on morphology in the *Collatikāram* section.

It may, however, be not out of place here to state that, while we need a systematically constructed syntax, we need to have also a systematically constructed semantics (not divorced from the systematically constructed syntax). It is to be regretted that there is a tendency, not only among linguistic scientists (particularly of the American school; see Einar Haugan, "Directions in Modern Linguistics," *Language* 27. 211-12) but also among logicians, to ignore the need for a systematically constructed semantics. Adopting the words of Professor Rudolf Carnap in this context (see his *Formalization of Logic,* p. xiii; Cambridge, Massachusetts; Harvard University Press) one is tempted to emphasize that even in descriptive or historical linguistics the development of the semantical method is still in its first phases. (I am indebted to Prof. C. R. Sankaran for drawing my attention to Carnap's work and for helping me in stating the problem posed in this footnote).

1. At the head of a sentence or clause as actor (with adjective preceding, if any):

(i) *Kēcavaṉ palikkal paṟṟiccu, nāḻi ari amaccu.*

(ii) *āka ńel nāṟpatu paṟa.*

2. At the end of a sentence as actor:

ipparitu viṭupēṟu aṭṭipēṟāka Ayyanaṭikaṭiruvaṭiyāl Tarisāppaḷḷikku aṭṭuvittukkuṭuttāṉ Maruvāṉ Sapīr Īśō.

-*a* stems:

Neut.

12th: *tirukkoṭikkūṟa* (5-53), *tiru-k-kuṭa* (5-54), *eṉṉa* (5-58), *veṟṟila* (5-59).

-*a* stems:

Neut.

12th: *aṭaikkā* (5-45,), *aṭakkā* (5-63), *paḻukkā* (5-59).

-*i* stems:

Masc.

10th: *Ayyaṉaṭikaṭiruvaṭi* (1-3), *Irāṃa-tiruvaṭi* (2-17), *Ayyaṉaṭikaḷ-tiruvaṭi* (2-16), *Puṉṉaittalai-p-pati* (2-42), *Pūḷaikkuṭi-p-pati* (2-42), *Nampi* (4-47), *Kīrtti-ēṉati* (7-5).

11th: *Iravi-kaṇṇi* (3-5).

12th *Kuṭipati* (1-55), *Śrī-Vira-Utaiyamārttāṇṭavarmma tiruvaṭi* (3-1), etc.

13th: *Vīra-Kēraḷa-tiruvaṭi* (2-3), *Kaṇṭaṉ-ńeṭi* (2-3), *Irāmaṉ-iravi* (4-14), *Paḻārar-tiruvaṭi* (5-10).

Neut.

10th: *prakṛti* (2-41), *ńāḻi* (3-3), *pāti* (4-23), *miḷi* (4-29), *poṟi* (4-409), *tūṇi* (4-40), *ari* (5-2), *cēri* (5-5), *oṭi* (7-10), *puḷi* (7-14), *toṭi* (9-1), *pari* (10-2), *ucci* (10-5), *kaṟi* (11-8), *Māyi* (12-2), *kañci* (12-2), *pūmi* (12-2).

11th: *sańtatippirakiriti* (5-20), *ari* (6-4).

12th: *patiṉāḻi* (1-25), *aruḷi* (2-60), *ńāḻi* (2-70), *piracatti* (5-4), *ari* (5-51), *virutti* (5-106), *kokkaruṇṇi* (5-142), *pūmi* (5-16), *muṭṭiraṭṭi* (5-268), *mēḻppāti* (7-17), *uruḷi* (8-38).

13th: *tecami* (3-2), *veḷḷi* (4-2), *ari* (5-4), etc.

-*u* (ə) stems:

Neut.

10th: *uḷaku* (2-15) *yāṇṭu* (3-1), *kāṭeṟu* (3-2), *viḷakku* (4-39), *kaḷañcu* (4-53), *paṅku* (5-3), *poḻtu* (5-15), *kūṟu* (7-9), *vittu* (7-13), *kuṭikūṟu* (8-2), *uppu* (11-8), *kaḻlu* (12-4), *ñāyiṟu* (13-2), *iṭaiyiṭu* (13-12).
11th: *ulaku* (5-14), *eḻuttu* (5-28), *Mīṉañāyiṟu* (6-2), *paricu* (7-2).
12th: *Ciṅṅañāyiṟu* (2-8), *kaiyeḻuttu* (2-134), *oṉṟu* (5-1), *vittupāṭu* (5-95), *uppu* (5-192), *viḻuvu* (5-259), *celavu* (5-267), *yāṇṭu* (6-1), *tiruvamirtu* (8-3).
13th: *yāṇṭu* (1-1), *amirtu* (1-9), *tirumōtu* (2-2), *pacceppairu* (2-2), *Mīṉañāyiṟu* (3-1), *tiru-uṭampu* (4-4), *eḻuttu* (4-9).

-*ai* stems:

Masc.

10th: *Iravi-Kōtai* (12-6), *Śrīvallabhaṅkōtai* (13-7).
11th: *Vīrakkuṟumpuṟai* (6-18), *Āticcaṅkōtai* (8-5), *piḷḷai* (8-5).

Neut.

10th: *ellai* (2-13), *piḻai* (2-47), *tuṭai* (4-45), *vaṭṭakai* (7-46), *pukai* (8-1), *eṇṇai* (10-7), *paraṭai* (9-2), *paṟai* (13-10), *ṅaṭai* (13-15).
11th: *paraṭai* (7-1), *sabhai* (7-1).
12th: *ellai* (4-8), *sabhai* (5-3), *veṟṟilai* (5-44), *Maṇṇarappeṟai* (5-142), *tuṭai* (6-6).

13th: *sabhai* (5-10).

-*o* stem:

Masc.

10th: *Sapīr-Īśo* (2-50).

Consonantal stems:

Masc.

10th: -*r*: *Eśodā Tapir* (1-5).
-*l*: *āḷkoyil* (6-9).
-*ḷ*: *perumāḷ* (4-43), *potuvāḷ* (6-10).
11th: -*ṟ*: *ūr* (7-1).
-*ḷ*: *potuvāḷ* (1-3).
12th: -*ṟ*: *ūr* (1-35).
-*ḷ*: *potuvāḷ* (1-35).
13th: *ḷ*: *tavai-p-potuvāḷ* (2-1).

Neut.

10th: -ṉ: *poṉ* (4-89).
-y: *ńey* (5-10), *tēṅkāy* (7-14).
-r: *etir* (6-5).
-l: *kāyil* (2-11), *matil* (2-12), *kaṭal* (2-13), *kōyil* (2-37), *ńel* (5-1).
-ḻ: *kīḻ* (12-1).
-ḷ: *ńāḷ* (2-16).

11th: -ṇ: *ūṇ* (8-5).
-l: *cēṟikkāl* (6-18).
-ḷ: *ńāḷ* (7-2).

12th: ṉ: *poṉ* (5-265).
-y: *ńey* (5-35).
-l: *ńel* (2-88), *pāl* (5-50), *ńūl* (5-51).

13th: -l: *ńel* (5-2).
-ḷ: *ńāḷ* (4-2), *tiṅkaḷ* (4-4).

Stem with the enunciative *u* as the nom. sg.

Masc.

11th: *peṇṇu* (8-5).

Nominative with gender suffixes:[1a]

Masc.

-*aṉ*:

10th: *matināyakaṉ* (1-17), *Cēṅtaṉ-caṅkaraṉ* (3-2), *kaṭampan-kumaraṉ* (4-4), *Nāṟāyaṇaṉ-Caṅtiracēkaraṉ* (7-6), *peruṅtaccaṉ* (4-66), *ūrāḷaṉ* (6-89), *kaṭaviyaṉ* (7-44), *emperumāṉ* (10-3), *uḷpāṭaṉ* (11-18), *pāṭṭamāḷaṉ* (12-4), *perumutiyaṉ* (12-7).

11th: *Kōvarttaṉ-Mārttāṇṭaṉ* (1-1), *Kuṉṟaṉ-kōviṅtaṉ* (1-2), *ńāyaṉ* (6-7), *tāḷvāriyaṉ* (6-16), *kaṭavaṉ* (6-21), *atikāraṉ* (6-22), *paṭai-uḷtaṉ* (6-22), *Iṭaiyiṭaṉ* (8-4), *kaṭaviyaṉ* (8-5).

12th: *Irāmaṉ-tāyaṉ* (1-47), *Nārāyanaṉ-nārāyaṇaṉ* (1-49), *Kumaraṉ-utaiya-vammaṉ* (2-67), *Kaṇṇaṉ-tēvaṉ* (2-91), *Cattipuramaṉ* (2-94), *kuṇa-vāriyaṉ* (2-104), *camañcitaṉ* (8-8), *uvaccaṉ Kāmaṉ-kiruṭṭan* (8-35).

13th: *camañcitaṉ* (1-2), *Vīra-Irāmaṉ* (1-3), *Pallavarāyaṉ* (1-4), *Kōviṅṅtaṉ-ceṉṅaṉ* (4-8), *Kēraḷaṉ-Kumaraṉ* (4-9).

1a. See under 'Gender', pp. 61-62.

Neuter nouns with the attribute of masculinity:[2]

-aṉ:

10th: *Viyāḷaṉ* (7-3).
11th: *Viyāḷaṉ* (3-2), *Putaṉ* (6-3), *cańtiraṉ* (5-19).
12th: *Viyāḷaṉ* (3-1).
13th: *Viyāḷaṉ* (1-1).

-āṉ:

10th: *tīyamāḻvāṉ* (1-17), *vaṇṇāṉ* (1-16).
11th: *kaṇattāṉ* (8-5).
12th: *ńāṭuvāḻkkaiyāṉ* (2-48), *Ātaṉaruṉayāṉ* (5-192).

-oṉ:

10th: *kaṭaviyoṉ* (4-48).

Fem.

cci:

13th: *tēvaṭicci* (4-6).

ammai:

10th: *Āticcaṉ-Umaiyammai* (13-19).

13th: *Umaiyammai* (3-3).

Neut.

-am:

10th: *tōṭṭam* (2-13), *kaccam* (3-2), *kalam* (4-9), *pāṭṭam* (4-44), *kāṇam* (5-15), *tālam* (7-45), *kollam* (13-1), *mukkālvaṭṭam* (13-17), *puraiyiṭam* (4-36).

11th: *kaccam* (1-2), *pirasātam* (5-6), *kāriyam* (6-3), *karumam* (8-1).
12th: *mārkkam* (1-72), *kollam* (2-2), *viyāḷam* (2-7), *ōlai-k-karaṇam* (4-7), *puraiyiṭam* (5-44), *ńilam* (5-101), *paṭakāram* (5-205), *kāriyam* (6-2), *kālam* (6-2), *taṇṭam* (6-6).
13th: *kollam* (1-1), *veñcaṉam* (1-5), *aṭṭilppeṟṟōlaikkaraṇam* (2-1), *viyāḷam* (3-2), *pūyam* (3-2), *mēṭam* (3-2), *aṉiḷam* (4-2), *makayiram* (4-4), *srī-pīṭam* (4-4), *kāriyam* (5-1), *talaikkāṇam* (5-2).

Feminine noun with neuter ending:
13th: *Uṇṇikaḷattiram* (4-6).

2. Cf. GUNDERT, *Grammar of the Malayāḷam Language*, p. 22.

Plural:

-*ar* (suffix):

Masc.

10th: *Iḻavar* (1-7), *taccar* (2-1), *veḷḷāḷar* (2-2), *aṟuṅūṟṟuvar* (2-9), *atikārar* (1-3), *kaṭavar* (3-6), *iruvar* (9-1), *ūrāḷar* (9-2), *iṭaiyiṭar* (13-14).
11th: *iṭaiyiṭar* (1-3), *veḷḷāḷar* (6-8), *puruḻar* (6-14), *ūrāḷar* (1-3).
12th: *Āriya brāhmaṇar* (2-34), *kārāḷar* (2-99) *aṟuṅūṟṟuvar* (2-46), *mūvar* (2-100), *cāmaṅtar* (2-54), *pirāmaṇar* (5-56), *atikārar* (6-2), *vaḷañciyar* (6-7).

13th: *atikārar* (5-5).

Neut. with attribute of masculinity:

10th: *caṅtirātittiyar* (1-20).

-*ār* (*suffix*):

Masc.

10th: *taḷiyār* (2-49), *pārpaṭṭār* (6-8), *ūrār* (9-1).
11th: *tirukkōyiluṭaiyār* (1-2), *kaṇattār* (1-5), *kūṟṟār* (2-4), *paraṭaiyār* (3-2), *ūrār* (7-1), *capaiyār* (7-1), *tiruṅāḷkkaṇattār* (8-1).

-*mār* (*suffix*):

Masc.

10th: *aṭikaḷmār* (3-1) (suffixed to hon. pl.) *potuvāḷmār* (13-13).
11th: *paraṭaimār* (8).
12th: *potuvāṇmār* (5-253), *piḷḷaimār* (5-258).

-*or* (*suffix*):

Ep. 10th: *mūttor* (9-2).

-*kaḷ* (*suffix*):

Masc.

10th: *atikārikaḷ* (12-5), *perumakkaḷ* (13-4), *cātukkaḷ* (13-21).
11th: *uvaccakaḷ* (1-3).
12th: *perumakkaḷ* (4-20).

Neut.

10th: *kuṭikaḷ* (2-21).
11th: *kuṭikaḷ* (5-13).

-arkaḷ (*suffix*) (double plural):

Masc.

10th: *ṅāṭuvāḻumavarkaḷ* (12-4), *cārṅṅavarkaḷ* (12-5).
12th: *uvaccarkaḷ* (5-29), *kāriyañceyyiṉṟavarkaḷ* (4-6), *vāriyamuṭaiyavarkaḷ* (5-22).

Honorofic Plural:

-ar (*suffix*):

Masc.

10th: *tēvar* (1-26), *kaṭavar* (4-54).
11th: *Pārkkaraṉ-Iravivaṉmar* (5-2), *ṅāyar* (7-3), *vāriyar* (8-2), *viḻāvāriyar* (8-3).
12th: *Tirukkuṇavātatēvar* (2-102), *Brahmaprajñā-bhaṭārar* (7-5), *paṭṭārakar* (7-8), *Maṇikaṇṭa-Rāmavarmmar* (7-11), *Padarāmabhaḷārar* (8-8).
13th: *brāhmaṇar* (1-5), *cōkiyar* (5-6), *Nāraṇaṅtātar* (5-6).

Fem.

12th: *tāyār-tēviyar* (5-3).

-ār (*suffix*):

Masc.

10th: *ceṭṭiyār* (4-84), *Kaṇapatiyār* (6-26).
11th: *Vīra-k-Kuṟumpuṟaiyār* (6-6).
12th: *piḷḷaiyār* (6-250).
13th: *piḷḷaiyār* (5-3).

Fem.

10th: *tamperumāṭṭiyār* (11-7).
12th: *tāyār* (5-3).

-kāḷ (*suffix*):

Masc.

10th: *perumāṉaṭikaḷ* (6-51).
11th: *Nelkuṉṟaṭikaḷ* (6-15).
12th: *Kulaicēkara-kōyilatikārikaḷ* (1-4), *cakkiravarttikaḷ* (2-16), *Vēṇāṭṭatikaḷ* (7-10).
13th: *Vēṇāṭṭatikaḷ* (1-3).

2. *The Accusative Case*

Certain particles which function as case-terminations are often affixed to the nominal bases with or without inflexional increments in order to form the accusative, instrumental, dative, ablative, genitive and locative cases. These case-signs do not change with gender or number but remain the same for all the three genders and for both the numbers.

The accusative has the following syntactic positions:—

1. Normally it occurs after the subject and precedes the verb or adverbial participle:

Kēcavaṉ palikkal paṟṟiccu, ñāḻi ari amaccu.

2. Apparently for the sake of emphasis, rarely the accusative precedes the subject and is placed at the head of the sentence:

aṉṟanṟu paṭum ulku añcuvaṇṇamum maṇikkirāmamum ilakkiccu vaippatākavum.

3. Also apparently for emphasis, rarely the accusative is placed after the verb at the end of a sentence:

pārkkōluṅkappāṉum paiñcakkaṇṭiyum muṉṉam peṟṟuṭaiyana ñānum viṭupēṟāka aṭṭikkuṭuttēn-iññālukuṭi Īḻavarum-m-orukuṭi Vaṇṇārum.

The terminations for the accusative are:

10th: *-ai, e* (?).
11th: *-ai.*
12th: *-ai.*
13th: *-ai.*

Accusatives with zero termination are common in regard to 'neuter' nouns in all the centuries.

-ai:

Masc.

10th: *paṭārarai* (6-20), *tēvarai* (6-99), *paṭṭārakarai-y-um* (13-6), *cāttirarai* (10-5), *emperumāṉai* (10-8), *uṭaiyārācērvarkaḷai* (3-6).
11th: *paṇimāṉiṭattai* (1-5), *pirāmaṇarai* (8-2), *māṉiṭattai* (8-2), *ñāṭuvāḻum-avarai* (7-3).
12th: *ñālutaḻiyai-y-um* (1-11), *veḷḷayāṭarai* (5-189), *atikārikaḷai* (5-266), *tirumēṉikāvalai* (5-279).
13th: *tiruvuḷḷamāyavarai* (pple. n.; 5-10). (See under 'participial nouns' for more examples.)

Fem.

11th: *peṇmakkaḷai* (5-18).

Neut.

10th: *paḷḷiyaiyum pūmiyaiyum* (2-22).

-*e* (termination ?):

Neut.

10th: *ńiccanaṭai-y-e* (6-63).

-*ai* is the accusative termination found in all the inscriptions studied here. Only in one doubtful instance in the tenth century is -*e* met with, which may be taken as an emphatic particle as well from the context in which it occurs.[3] Neuter nouns do not generally take the case termination for the accusative.

It appears, however, that by the close of the Early Old Malayāḷam period the -*ai* termination for the second case had changed to -*e*;[4] for the Malayāḷam grammar *Līlātilakam,* written about a century later, recognises only the *e*-ending, and expressly points out in the commentary that it is marked off from the Tamil -*ai* (see *Līl.*, II, 11; *GL*, p. 44). It is also pointed out in *sūtra* 14 of the second *śilpa* of the grammar that the second case ending -*e* is optional for inanimate and non-rational nouns (*acetane tiraści cāyam vikalpaḥ*), and that for rationals the second case ending is obligatorily used. "This agrees with the Tamil rule implied in *Tolkāppiyam* in a *sūtra* in the *Togaimarabu* portion of *Eḻuttu*:—*uyirtiṇi maruṅkiṉ oḻiyātu varutalum*". (*GL*, p. 52).

3. *The Instrumental Case.*

The terminations for the instrumental case are:

10th: -*āl*, -*koṇṭu*.
11th: -*āl*.
12th: -*āl*, *koṇṭu*.
13th: -*āl*.

3. Since final *ai* does not appear to have suffered any change till the 12th century, the *e* here has to be taken only as an emphatic particle.

4. The process of evolution of the Mal. second case ending -*e* was (as Prof. L. V. R. Aiyar points out in his *EMM*, p. 7): "e < a very much frontalized ə < front *a* < *a* west coast variant of Tamil -*ai*. The intermediate stage ə is attested by symbolic representation in Mss,...." cf. (*ivakaḷ*) *vēṇṭa* (-*k*-*kēṭṭu*) (10: 12-6).

-āl (*termination*):

Masc.

10th: *Ayyaṉaṭikaṭiruvaṭi-y-āl* (1-24).

Neut.

10th: *-i* stems (with the glide *-y-*):

patiṅtūṇi-y-āl (4-7), *ṅāḻi-y-āl* (4-92), *iṭaṅkaḻi-y-āl* (5-1), *pūmiy-āl* (9-1), *Pulipaḷḷi-y-āl*.

-u stems: (1) with the augment *-iṉ-*: *tuṭav-iṉ-āl* (3-4).

(2) with doubling of final consonant: *Kāṭṭeṭṭikkaikkoṭṭ-āl* (12-3).

-ai stems (with the glide *-y-*):

Mūḻikkaḷavyavastai-y-āṟ (4-50), *patiṉāḻipparai-y-āl* (7-12), *vakai-y-āl* (9-2).

-a(*m*) form (with the augment *-tt-*):[5]

Kaṇavatiariyaṭa-tt-āl (5-10).

-r stems: *Perumpuṟṟattūrāl* (5-10), *Kuṉṟattūrāl* (14-7).

-ḷ stems *iṅṅāḷ-āl* (13-3).

11th: *-i* stems (with the glide *-y-*):

ṅāḻi-y-āl (6-11), *opāti-y-āl* (7-2), *itaravaḻi-y-āl* (8-2).

-ai stems (i) with the glide *-y-* and the augment *-in-*: *ilekai-y-iṉ-āl* (6-14).

(ii) without augment: *aruḷicceykai-y-āl* (3-4).

12th: *-a* stems (with the glide *-y-*):

Kuva-y-āl (5-30), *maṭa-y-āl* (5-36), *iraṭṭa-y-āl* (5-61).

-i stems (with the glide *-y-*):

iṭaṅkaḻiy-āl (2-71), *ṅāḻi uri-y-āl* (2-116), *poli-y-āl* (3-2), *Iḷampelāppa-ṟatti-y-āl* (5-23), *Puṉṉaveli-y-āl* (5-34), *Pūppaḷḷi-y-āl* (5-57), *pūmi--y-āl* (5-62), *tūṇi-y-āl* (5-74), *Perumpaḷaññi-y-āl* (5-115).

-u (ə) *stems*: (i) without change:

āṇt-āl (4-28), *Ceṅkuṟupp-āl* (5-66).

(ii) *-āl* added after doubling the last consonant:

Neṭuṅṅoṭṭ-āl (5-6), *Muḷakutuṭavv-āl* (5-20), *Eṟikariṅāṭṭ-āl* (5-114), *vittupāṭṭ-āl* (5-77), *Kuḻaikkāṭṭ-āl* (5-173).

5. For convenience, the forms with the neuter ending *-am* are inserted here in the following pages.

-ai stems (with the glide *-y-*):

arai-y-āl (2-25), *parai-y-āl* (2-26), *kaṭamai-y-āl* (2-110), *kai-y-āl* (4-30), *maṭai-y-āl* (5-35), *Pālaippūṉṉai-y-āl* (5-94), *Pūḷai-y-āl* (5-127), *tuṭavai-y-āl* (5-133), *irutūṇi arai-y-āl* (5-164), *iraṭṭai-y-āl* (7-9).

-a(m) forms (with the augment *-tt-*):

kala-tt-āl (2-88), *Kuravarkoṇa-tt-āl* (5-8), *pāṭṭa-tt-āl* (5-17), *rakṣā-pōka-tt-āl* (5-31), *tōṭṭa-tt-āl* (5-46), *puraiyiṭa-tt-āl* (5-47), *Uccikuḷa-tt-āl* (5-146).

-ṇ stems: *Vālamaṇṇāl* (5-140), *Āramaṇṇāl* (5-143), etc.

-r stems: *Navayyaṅallūr-āl* (5-9), *Kollūr-āl* (5-10), etc.

-l stems: (i) with doubling of final consonant:

nel-l-āl (2-86).

(ii) without doubling: *Patiṉāḻikkāl-āl* (4-26) *Muḷaiccal-āl* (5-17), *Nākal-āl* (5-67), *marakkāl-āl* (6-5).

-ḷ stems: *aṭṭaikkōḷ-āl* (1-16), *iṅṅāḷ-āl* (3-1), *tiṅkaḷ-āḷ*.

13th *-a* stem (with the glide *-y-*): *para-y-āl* (1-6).

-i stem: (with the glide *-y-*): *poli-y-āl* (5-6).

-ai stem: (with the glide *-y-*): *kaṭamai-y-āl* (5-6).

-āl suffixed to numerals with the augment *-in-*: Examples:

12th: *iraṇṭ-iṉ-āl* (3-1), *irupattumūṉr-iṉ-āl* (5-247).

-āl in sandhi contexts: 10th: *araiyaṭattā* (*nālupaṅku*) (5-11), *pūmiyā* (*niyati*) (5-14), *iṭaṇkaḻiyā* (*nāḻi*) (5-14).

-koṇṭu (*termination*):

Masc. (with the accu. suffix *-ai*):

11th: *Etiraṅkaviraṉai-k-koṇṭu* (8-5).

12th: *atikārikaḷai-k-koṇṭu* (5-266).

Neut.

10th: *-i* stems: *arici-koṇṭu* (3-6), *ari-koṇṭu* (12-6), etc.

-y stem: *ńey-koṇṭu* (3-7).

Bases used in an instrumental sense without any termination:

10th: (*iruṅāḻi*) *ari* (*tiruvamirtum*) (8-1), (*paṅtiru*) *kalam* (*tiruvak-kiramum*) (12-2).

12th: (*aññāḷikku okkum*) *iṭaṅkaḻi* (*ńāṉūṟṟu ńāḻi*) (2-104), *maṭa* (*ńāḻi*) (5-59).

13th: *maṭai* (*eṭṭuṅāḻi*) (5-4).

Social:

The particles *oṭu, oṭukūṭa, kūṭa* are affixed to bases to express the idea of 'association' or 'sociality'.

oṭu:

Masc.

12th: *āriyar-oṭu* (2-21).

Neut.

10th: *palaṅkāyiṉ-oṭu* (3-3), *muṭṭiraṭṭi-y-oṭu* (6-58).

oṭukūṭa:

Masc.

11th: *potuvāḷ-oṭukūṭa* (8-3).

Neut.

10th: *ńīrttuḷḷi-y-oṭukūṭa* (2-7), *Ciṟṟūrńaṭai-y-oṭukūṭa* (13-9).
12th: *mēṟpaṭi-y-oṭukūṭa* (5-190).
13th: *ńaṭa-y-oṭukūṭa* (1-9).

-kūṭa:

Masc.

12th: *cōmāyi-k-kūṭa* (5-2).

-āl and *koṇṭu* are the third case terminations met with in the inscriptions. Of these two, the ending *-koṇṭu* is only rarely used as an instrumental suffix. From the fact that modern Malayāḷam would use *-koṇṭu* in most of the contexts in which *-āl* is found in the inscriptions, it may be presumed that the instrumentals with *-koṇṭu* arose in the colloquials of the west coast speech, though quite early in its history so as to become deep-rooted enough to find representation in the colloquial writings of the tenth century.

It is remarkable that the fourteenth century *Līlātilakam* mentions only *-ōṭu* in the relevant *sūtra* (*Lil*, II, 11), while *-āl* and *-koṇṭu* are mentioned in the commentary (wherein *-ōṭu* is mentioned as an *upalakṣaṇa*). *-ōṭu* is met with in the inscriptions only in the sense of a 'social, and the suffix appears to have been used in an instrumental sense but rarely (cf. *GL*, p. 46; *GML*, p. 141). This amply justifies L. V. R. Aiyar's observations on this point in his *Grammar in Līlātilakam*: "While *-ōṭu* and *-āl* are equally important as third case endings in Malayāḷam, why is *-ōṭu* alone

mentioned in the *sūtra* and then described in the commentary as an 'upalakṣaṇa'? I suspect that the model of the *Tolkāppiyam Colladigāram sūtra* which mentions only *-ōṭu* as the third case ending for Tamil though *-ōṭu* and *-āl* were both current, might have influenced the author of *Līlātilakam* who (be it observed here) was a keen student of this Old Tamil grammar and some of its earlier commentaries. It is noteworthy that later Tamil grammars like *Vīracōḻiyam, Nēmiṉātam* and *Naṉṉūl* mention both *-oṭu* (and *ōṭu*) and *-āl* (and *-āṉ*) as equally important (in the *sūtras* themselves)." (*GL*, pp. 45-6).

4. *The Dative Case*

The terminations for the dative case are:

10th: *-k-ku, -u-k-ku, -iṉ-ku, -iṉ-u-k-ku, -iṉ-u, -iṉ-ṉu.*
11th: *-k-ku, -u-k-ku, -iṉ-u-k-ku, -iṉ-u, -iṉ-ṉu.*
12th: *-ku, -k-ku, -iṉ-u, -iṉ-ṉu.*
13th: *-k-ku, iṉ-u, iṉ-ṉu.*

-ku (*-k-ku*):

Masc.

10th: *-i* stems: *kō-t-Tāṇu-Iravi-kku* (1-1), *Kōtai-Iravi-kku* (6-2), *Iṅtu-kōtaivaṉmar-tiruvaṭi-kku* (12-1), etc.
-ai stems: *Iṅtukōtai-kku* (10-1), etc.
-ḷ stems: *perumāṉaṭikaḷ-kku* (6-51), *perumāḷ-kku, kōyilatikārikaḷ-kku* (12-4).
Plural forms: *Tarisāppaḷḷiyār-kku* (1-13), *tēvar-kku* (2-2), *paṭṭārakar-kku* (8-1).

11th: *Pārkkaraṉiravivarmmar-tiruvaṭi-kku* (1-1), *kōyilatikāri-kku* (8-4).
-ai stems: *ūrāṇmai-kku* (7-3), *Āticcaṉ-kōtai-kku* (8-1), *tavai-kku* (8-4), *piḷḷai-kku* (8-6).
-ḷ stems: *Tiruṅelli-p-perumāḷ-kku* (6-4).
Plural forms: *Śrīvaiṣṇavar-kku* (6-19), *tiruṅāḷkkaṇattār-kku* (8-1), *kōyilatikārikaḷ-kku* (3-3), *marumakkaḷ-kku* (5-17).

12th: *-i* stems: *Rāmavarmma-tiruvaṭi-kku* (6-1), *kuṭipati-kku* (1-42).
-ai stem: *piḷḷai-kku* (8-11).
-ḷ stem: *perumāḷ-kku* (3-1).
Plural forms: *tampimār-ku* (3-1), *Mahādēvar-ku* (4-33), *tevar-ku* (4-31), *vāṇiyar-kku* (5-148), *paṭṭārakarkku* (6-3), *merpaṭiyār-kku* (5-79), *aṭikaṇmār-kku* (5-271), *taṅtirukaḷ-kku* (5-176).

13th: -*i* stems: *Kēraḷavarmma-tiruvaṭi-kku* (5-1), *Kaṇapati-kku* (5-3).
-*ḷ* stem: *perumāḷ-kku* (1-4).
Plural forms: *tēvar-kku* (2-2), *cōkikaḷ-kku* (5-10), etc.

Fem.

10th: *Āticcaṉ-Umaiyammai-kku* (13-7).

Neut.

10th: -*i* stems: *Tarusāppaḷḷi-kku* (1-6), *kuṭi-kku* (1-7), *paḷḷi-kku* (2-3), *cāṅti-kku* (4-23), *pali-kku* (4-35), *pūtapali-kku* (5-8), *oḷukkavi-kku* (6-20), *Paṟayaṉkari-kku* (7-39), *paṅtīraṭi-kku* (9-1), *ucci-kku* (9-1), *pāti-kku* (12-2).
-*i* stem with a final 'needless' -*y*:[6] *paḷḷippūmiy-kku* (2-1).
-*u* stem (with gemination of last consonant): *Veṭṭikkarikkāṭṭu-kku* (12-1).
-*ai* stems: *eṉṉai-kku* (2-3), *ellai-kku* (2-15), *aṭimai-kku* (8-29), *ceṉṉaṭai-kku* (4-5), *āṇṭai-kku* (6-14), *pukai-kku* (6-16), *tārai-kku* (6-38), *Iṟai-kku* (9-1), *ūrāṇmai-kku* (9-70), *Vayalkkālcciṟai-kku* (12-1), *Iṭaicciṟai-kku* (12-1), *ārātiṉai-kku* (12-2).
-*y* stem: *ṅey-kku* (7-19). -*r* stem: *ūrkku* (6-58).
-*l* stem (with sandhi change): *kōyiṟ-ku* (6-54).

11th: -*i* stems: *paṅtīraṭi-kku* (6-4), *ṅīrāṭṭuppaḷḷi-kku* (6-13), *tiruppali-kku* (7-2).
-*u* stem (with -*ai* replacing -*u*): *iraṇṭām-āṇṭai-kku* (3-1) cf. the the 'needless' -*y* above).
-*l* stem: *kōyilkku* (5-13).

12th: -*a* stems: *Kavai aṟa-kku* (5-110), *Kuppara-kku* (5-172).
-*i* stems: *aññāḷi-kku* (2-103), *oṭi-kku* (2-127), *arici-kku* (3-1), *mēlppāti-kku* (4-19), *ariyi-kku* (4-25), *kuṭi-kku* (5-43), *peli-kku* (5-47), *ciṟaiyaṭi-kku* (5-158), *meṟpaṭi-kku* (5-180), *virutti-kku* (5-181), *paṇi-kku* (5-283), etc.
ai-stems: *mālai-kku* (4-9), *Kaṉukarai-kku* (5-14), *Kuṟuvai-kku* (5-72), *Muruṅṅaimaṉai-kku* (5-97), *vilai-kku* (5-98), *paṟai-kku* (5-161), *pālikai-kku* (5-172).
-*l* stems: *tirumēṉi-kāval-kku* (5-106), *koṉṟaikkal-kku* (5-134), *Iṭiññil-kku* (5-175).

13th: -*i* stem: *paṅtīraṭi-kku-* (1-9).
-*ai* stem: *amai-kku* (4-16), (also *āṇṭai-kku,* 3-1; see above).

6. See under Phonology, p. 24.

-u-k-ku (termination):

Masc.

10th: *Cuṅtaṉ-ukku* (1-27), *Ayyaṉ-ukku* (6-39), *ṅaṭṭavaṉ-ukku* (5-1).

11th: *Iravi-Irāmaṉ-ukku* (7-1), *Issuppu-Iṟappāṉ-ukku* (5-6).

Plural: *āṇmakkaḷ-ukku* (5-17).

Fem.

11th: *Plural*: *peṇmakkaḷ-ukku* (5-17).

Neut.

10th: a(*m*) *forms* (with the augment *-tt-*) *maṅkalya-tt-ukku* (2-38) *iṅṅakara-tt-ukku* (2-48).

-iṉ-ku (termination):

Neut.

10th: *Vēṇāṭṭ-iṉ-ku* (13-23).

12th: (with sandhi change): *cilav-iṟ-ku* (2-123).

-iṉ-u-k-ku (termination):

Neut.

10th: *-u* stems: *viḷakk-iṉ-ukku* (4-13), *Nūñc-iṉ-ukku* (4-36), *i-vv-āṟiṉ-ukku* (4-46), *celav-iṉ-ukku* (9-2), *maṟṟoṉṟ-iṉ-ukku* (9-2), *tiruvamut-iṉ-ukku* (3-9).

-a(*m*) *forms* (with the augment *-tt-*): *ṅivedya-tt-iṉ-ukku* (4-10), *akkira-tt-iṉ-ukku* (4-28), *caṅtaṉa-tt-iṉ-ukku* (6-1).

11th: *-u* stems: *paṅtīraṭittiruvamirt-iṉ-ukku* (6-10), *celav-iṉ-ukku* (6-19), (with gemination of final *-ṟ*): *mūttakūṟṟ-iṉ-ukku* (6-8).

-iṉ-u (termination):

Neut.

10th: *-u* stems: *vitt-iṉ-u* (7-24), (with gemination of final *ṭ*): *Veṭṭikkarik-kāṭṭ-iṉ-u* (4-125).

-a(*m*) forms (with the augment *-tt-*): *ṅevēttiya-tt-iṉ-u* (6-24), *tiru-vakkira-tt-iṉ-u* (7-6), etc.

11th: *-u* stems: *āṇṭiraṇṭ-iṉu* (1-1), *celav-iṉu* (8-4), *ṅantā-viḷakk-iṉu* (6-10), (with gemination of final *-ṭ*): *Naṉṟuḷaiṅāṭṭ-iṉu* (3-3).

12th: -*u* stems: *iranṭ-iṉu* (5-49), *oṉṟ-iṉu* (6-5).
-*a*(*m*) forms (with the augment -*tt*-): *virōta-tt-iṉu* (2-22), *prāyac-citta-tt-iṉu* (2-23), *Neṭṭaya-tt-iṉu* (5-141).

13th: -*u* stem: *celav-iṉu* (2-3).

-*iṉ-ṉu* (-*ṉ-ṉu*) (*termination*):

Masc.

12th: *Āticcaṉ-Utaiyanaṉ-ṉu* (3-1), *Cēkaraṉ-kumaraṉ-ṉu* (4-16), *āḻvāṉ-ṉu* (6-2), *Keraḷa-rāmaṉ-ṉu* (8-19).

13th: *Taṅkappallavarāyaṉ-ṉu* (1-7), *Tirukkaṇṇappaṉ-ṉu* (5-3).

Neut.

10th: -*u stems*: *tiruvamirt-iṉ-ṉu* (10-3), *iccelav-iṉ-ṉu* (11-10).
-*am form* (with augment -*tt*-): *cantaṉa-tt-iṉ-iṉu* (8-2).

11th: -*ā* stem (with the glide -*v*-): *tiruviḻā-v-iṉ-ṉu* (8-4).

12th: -*ā* stem: (with the glide -*v*-): *viḻā-v-iṉ-ṉu* (5-30).
-*u* stems: *aḷakaccu muppat-iṉṉu* (3-1), *kalveṭṭiṅāṭṭiyat-iṉṉu* (4-11), *Mutupalāṟ-iṉṉu* (4-13), *Campāmaṇṇ-iṉṉu* (5-19), *vitt-iṉṉu* (5-27), *iranṭ-iṉṉu* (5-50), *kūtt-iṉṉu* (5-45), *kaiviḷakk-iṉṉu* (5-47), *tiruva-mirt-iṉṉu* (5-56), *tirumorat-iṉṉu* (5-59), *uvāv-iṉṉu* (5-101), *kaḷaiññ-iṉṉu* (5-265), *aḷakaccu patiṉañc-iṉṉu* (8-20), *puraiyiṭaṅṅaḷ mūṉṟ-iṉṉu* (7-1), *ṅāl-iṉṉu* (8-21).
-*u* stems (with doubling of last consonant): *Kampuḷḷāṟṟ-iṉṉu* (4-10), *Iṭaiccuraṅāṭṭ-iṉṉu* (5-104), *Veṇāṭṭ-iṉṉu* (5-250).
-*a*(*m*) forms (with the augment -*tt*-): *Cemmuṭaimāmpaḷḷa-tt-iṉṉu* (4-8), *ṅila-tt-iṉṉu* (5-11), *Aya-tt-iṉṉu* (5-12), *Iyalappaḷḷimalaṅa-tt-iṉṉu* (5-28), *nūlaḷa-tt-iṉṉu* (5-50), *purayiṭa-tt-iṉṉu* (5-51), *maṅka-laya-tt-iṉṉu* (5-52), *cīvita-tt-iṉṉu* (5-82), *koṇa-tt-iṉṉu* (5-104), *kuḷa-pāṭṭa-tt-iṉṉu* (5-134), *irava-tt-iṉṉu* (5-139), *kalaica-tt-iṉṉu* (5-172), *kuḷa-tt-iṉṉu* (5-172), *Paṅkuṉi-uttiṟa-tt-iṉṉu* (5).

13th: -*u stem* (without change): *tiruvamirt-iṉṉu* (1-4).
(with gemination of last consonant): *Oṭa-ṅāṭṭ-iṉṉu* (4-8).
-*a*(*m*) forms: *ṅamakkāra-tt-iṉṉu* (5-3).

The dative form with -*k-ku* is used to express the time of an action, as in:

10th: *uccikku ṅāḻiyari tiruvakkiram* (9-1), *uccitiriññu irupatiṟṟaṭi-kku* (10-6).

An examination of the chronological distribution of the dative case terminations found in the inscriptions reveals that there is a steady evolu-

tion from an earlier *-ku* (*k-ku*, or *-u-k-ku*) to the later *-iṉ-ṉu* (*-ṉ-ṉu*) and that accent played an important role in this, as in several other developments in the speech of Kēraḷa. The process of evolution seems to have been:—*ku*[7] (*-k-ku* on account of accent and *-u-k-ku* with an enunciative *-u-*) > *iṉ-ku* (?) > *iṉ-u-k-ku* > *-iṉ-u* (*-ṉ-u*) > *-iṉ-ṉu* (*-ṉ-ṉu*). Of these *-iṉ-ku* appears to represent a very unstable middle stage which could not fit in with the general accentual scheme of the language.

Quite early in the history of the west coast speech *-ku* came to be applied to 'neuter' inflexional bases embodying the augment *-iṉ-* (as in Early Middle Tamil), apparently on the analogy of forms like *Ayyaṉ-u-kku*. Soon a prop-sound developed between the *ṉ* of *-iṉ-* and the following *-ku* evidently due to the accenting of *ṉ*, and this prop-sound came to be represented in writing with an *u*. The form *Vēṇāṭṭ-iṉ-ku* found in a tenth century inscription appears to represent the starting point of this development,[8] while forms like *viḷakk-iṉ-u-kku* (as in Middle Tamil), occurring numerously in the tenth and eleventh centuries show the evolved forms. With a tendency to increase the accent on *ṉ* the *-k-ku* came to be regarded as irrelevant to the dative sense and was dropped; and the increased accent on *ṉ* was sometimes represented with a double *ṉṉ*. Thus: *viḷakk-iṉ-u-kku* > *viḷakk-iṉ-u* > *viḷakki-iṉ-ṉu*.[9]

It is noteworthy that the *-iṉ-u-kku* forms are not met with after the eleventh century.[10] Apparently on the analogy of the neuter forms with *-iṉ-ṉu*, the suffix *-ṉ-ṉu* developed (by the beginning of the twelfth century ?) for the masculine bases with the gender suffix *-aṉ*. E.g. *Rāmaṉ-ṉu* (12th) for the earlier (11th century) form *Rāmaṉ-u-kku*.[10]

5. *The Ablative Case.*

The termination for the ablative case is:

12th: *il-ńiṉṟu*
13th: *il-ńiṉṟu*

7. From a comparison of the dative endings in the principal Dravidian speeches, it is possible to suggest a proto-Dr. form **-kə*.

8. Cf. *EMM*, pp. 9 and 10 See also L. V. R. Aiyar, "Two Notes," *Journal of Oriental Research* 10, (1936) 252-255.

9. The tendency to discard the earlier sandhi rules may have been helpful to this development.

10. This does not, of course, mean that the (*-in-*)*u-kku* termination went out of use after the eleventh century. It seems to have survived right up to the end of the Early Old Malayāḷam period at any rate, as shown by the few instances in *Kauṭalīyam-bhāṣā*.

12th: *virutti-y-il-ṅiṉṟu* (*varuṅ-ṅellu*) (8-36).
13th: *Iravi-Kēraḷavarma-tiruvaṭi-y-il-ṅiṉṟu* (4-7).

-il-ṅiṉṟu, the only fifth case ending found in the inscriptions studied here, is compounded of *-il* (the locative ending) and *ṅiṉṟu* (the old conjunctive participle of *ṅil*). It is noteworthy that *-il-ṅiṉṟu* is also the fifth case termination mentioned by the Early Middle Tamil grammar, *Vīracōḻiyam* (*Vēṟṟumai*, 7). "Old Tamil had only *-iṉ* to express the fifth case meanings (*TC*, 77); *il-ṅiṉṟu* appears only in Early Middle Tamil texts." (See *EMM*, p. 10). The relevant sūtra of *Līlātilakam* mentions *ṅiṉṟu* as the fifth case ending, while the commentary mentions *il-ṅiṉṟu*, *-mēl-ṅiṉṟu*, and *pakkal-ṅiṉṟu* which are all current in Modern Malayāḷam.

6. *The Genitive Case*

The terminations for the genitive case are:

10th: *-uṭai*, *-uṭaiya*, *-iṉ*.
11th: *-uṭaiya*, *-iṉ*.
12th: *-uṭaiya*, *-iṉ*.
13th: *-uṭaiya*.

-uṭai (termination):

Masc.

10th: *paṭārar-uṭai* (6-13), *Śrī Vallapaṅkotai-uṭai* (13-18),.

-uṭaiya (termination):

Masc.

10th: *tevar-uṭaiya* (6-95), *paṭṭārakar-uṭaiya* (14-10), *Tirumūḻikkaḷattappaṉ-uṭaiya* (10-2).
11th: *paṭārakar-uṭaiya* (7-1), *Ceṅṅaṉ-Tāyaṉ-uṭaiya* (7-1), *tiruṅāḷkkaṇattār-uṭaiya* (8-2).
12th: *atikārar-uṭaiya* (6-1).
13th: *atikārar-uṭaya* (5-2).

Neut.

10th: -*u* stem: *Kālkkaraiṅāṭ-uṭaiya* (12-4).
11th: -*u* stems: *Vēṇāṭ-uṭaiya* (1-1), *Vēṇāpoliṅāṭ-uṭaiya* (5-21), etc.
-*l* stem: *tirukkoyil-uṭaiya* (2-3).
12th: -*a* (*m*) form: *Pirāyiśvaram-uṭaiya* (4-32).
13th: -*u* stem: *Vēṇaṭ-uṭaiya* (4-7).

The inflexional augment *-iṉ-* is used to bring out a sixth case relationship in the following instances:—

Masc.

13th: (with sandhi change of *ṉ* to *ṟ*):
Nārāyaṇatātariṟ (*pirpākam*) (5-10).

10th: *-i* stems (with the glide *-y-*):
aṅtiy-iṉ (*muṉṉai*) (6-10), *ucci-t-tiruppali-y-iṉ muṉṉe* (11-8).
-u stems: *tiruviḷakk-iṉ eṉṉai* (10-7), *Veṭṭikkarikkāṭṭ-iṉ* (*meṟ celvitu*) (12-7), etc.
-am form (with the augment *-tt-* and sandhi change) *Maka-tt-iṉāḷ* (12-2; < *Makattiṉ ṅāḷ*).

12th: *-u* stem: (i) without change: *vittupāṭ-iṉ-mēl* (5-11).
(ii) with doubling of last consonant:
Pulikkoṭṭ-iṉ (*paṭakāram*), (5-223), *Nāvurkkoṭṭ-iṉ* (*paṭakāram*) (5-22), etc.
-a(m) form (with the augment *-tt-*):
Muṭṭakkaṭa-tt-iṉ (*paṭakāram*), etc. (5-204).

-uṭai and *-uṭaiya*, the sixth case terminations found in the inscriptions, were current as genitive suffixes in Early Middle Tamil as well.[11] It is worthy of mention here that *uṭai* and *uṭaiya* had no sixth case meaning in Old Tamil[12] (cf. *EMM*, p. 11).

The form *uṭaya* in a 13th century inscription reflects the general tendency in Old Malayāḷam to reduce the diphthong *ai* to *a*.

The terminations *uṭeya*, *uṭe*, and *iṭe* met with in Early Old Mal. texts like *Kauṭalīyam bhāṣā* side by side with *uṭaiya*, *uṭaya* and *uṭai* show further forward changes of *uṭai* and *uṭaya* during the period under reference.

Although the characteristic Malayāḷam sixth case ending *-ṉṟe* (*iṉṭe*) is not actually found represented in writing until the period of *Uṇṇuṅīli-sandēśam*, it is possible that the termination arose in the mass colloquials at a much earlier date, perhaps by the close of the twelfth century. (Cf. *EMM*, p. 12.) For *Kauṭalīyam* has forms like *ivaṉiṭe* which may have developed into *ivaṉṟe* through the stage *ivaṉṭe* (resulting from the lack of stress on *ṉ*) and then the *ṭ* changing into an alveolar plosive *t* (represented in this context by the symbol *ṟ*) due to the conjunction with the alveolar *ṉ*.

11. Cf. *Vīracoḻiyam, Vēṟṟumai*, 7.
12. Cf. *TC*, 220.

A sixth case relationship is brought out by the use of *-iṉ-* in instances like *tiruviḷakk-iṉ eṉṉai* (cf. *EMM*, p. 12). This type of genitive is found in all the centuries dealt with here, but it appears to have been generally used only in connection with non-rationals, since only one instance (in the 13th century) is met with where a rational masc.) has the ending.

The base itself, with or without the gender and number suffixes is often used with a genitive force as in *Ayyaṉ eḻuttu, uḻavumaṅkalattavakaḷ taṅtatiyil, mulai vilai,* etc. (See under Functional Syncretism for more examples). This phenomenon is also met with in all the centuries.

The locative is sometimes used with a sixth case sense as in *puraiyiṭattiṟ-pātiyum* (10th: 4-22) (see under Functional Syncretism).

7. *The Locative Case*

The terminations for the locative case are:

10th: *il, uḷ, attu, akattu, kāl.*
11th: *il, attu, kīḻ, mēl.*
12th: *-il, attu, akattu, akatt-iṉ-uḷ, ēl, kal, kal-il, kīḻ, mēl.*
13th: *il, attu, akattu, kal, mēl.*

-il (*termination*):

Neut.

10th: *-i* stems (with the glide *-y-*):
aṅkāṭi-y-il (1-15), *veṭi-y-il* (2-31), *aṅti-y-il* (3-5), *Kaṉṉi-y-il* (7-2), *Paṟaiyaṉkari-y-il* (7-7), *tiriy-il* (11-6), *Vaṭṭappoṭṭa-y-iṟ* (11-12), *irupattaiyyaṭi-y-il* (10-2), *taṅtati-y-il* (9-2), *Eṭṭikkari-y-il* (9-1), *pūmi-y-il* (7-19), *Pālaippaḻañci-y-iṟ* (7-11), *Oṭi-y-iṟ* (7-8). (See under 'Sandhi' for the change of the *l* of *-il* to *ṟ*).
-u stems: (i) without change:
paṭak-il (2-31), *Neytalmūkk-il* (7-25), *kiḻakk-il* (7-40, ii) with gemination of *ṭ* or *ṟ*:
Marakkāṭṭ-iṟ (4-21), *Kaccikkāṭṭ-iṟ* (4-37), *Kākkaikkāṭṭ-iṟ* (4-37), *kiḻiṭṭ-il* (13-13), *Puṉṉaiñāyiṟṟ-il* (7-8).
-ai stems (i) with the glide *-y-*:
Toḻukkuṟai-iṟ (4-37), *kai-yy-il* (13-11), *Ciṟaikkarai-y-il* (9-2), *Uḻavēṟccai-y-iṟ* (7-16), *Kaḻaṉikkarai-y-iṟ* (7-11), *Oṭṭai-y-il* (7-8).
(ii) without glide: *ittaṉai-il-um* (6-61).
-a(m) forms (with the augment *-tt-*):
ceppupattira-tt-il (1-21), *celavupattira-tt-il* (2-23), *puraiyiṭa-tt-iṟ* (4-22), *puṟa-tt-il* (4-40), *akkira-p-puṟa-tt-iṟ* (4-41), *Kōṭikkuḷa-tt-il*

(7-3), *Paṇṭāravāriya-tt-il* (7-4), *atikāra-tt-il* (7-6), *aka-tt-il* (10-3), *Mīṉa-tt-il* (11-2), *ńila-tt-il* (7-8).

-*r* forms:

(i) Final *r* being changed to *ṟ* and then doubled: *Ńākamputuṟṟ-il* (4-31).

(ii) Without change: *Kaṇṭiyūr-il* (7-21), *Ayirūr-iṟ* (13-6).

-*l* stems:

matil-il (1-15), *Ciṟumaṉal-iṟ* (7-9).

-*ḻ* stem: *Kaṉpūḻ-iṟ* (4-41).

-*ḷ* form: *pātamūlikaḷ-il* (3-7).

11th: -*i* stems (with glide -*y*-):

Kaṉṉi-y-il (8-1), *pańtirati-y-il* (8-3), *kari-y-li* (8-5).

-*u* stems: (i) without change: *kaḻiv-il* (3-2); (ii) with gemination of *ṭ* or *ṟ*: *mūttakūṟṟ-il* (6-7), *ceppēṭṭ-il* (6-14).

-*ai* stems: (with the glide -*y*-):

eṇṇai-y-iṟ (2-5), *kai-yy-il* (6-17).

-*a* (*m*) forms (with the augment -*tt*-):

Iṭapa-tt-il (3-2), *ńagara-tt-il* (5-13), *Tulā-tt-il* (6-2), *paṇṭāra-tt-il* (6-20), *Mīṉa-tt-il* (7-1).

-*ḷ* stem: *ńāḷ-il* (8-2).

12th: -*a* stems (with the glide -*y*-): *Ciṟṟāṟṟańkara-y-il* (5-22), *Koṭṭupeṟa-y-il* (5-63).

-*i* stems (with the glide -*y*-): *Kaṉṉiyil* (2-6), *meṟpaṭi-y-il* (5-26), *virutti-y-il* (7-12).

-*u* stems: (i) Without change: *kiḻakk-il* (4-4), *ńaṭuv-iṟ* (4-20), *cemp-il* (4-21), *viḷakk-il* (5-275), *Kokkoppaṟapp-il* (6-8), *Pulavaramp-il* (8-19).

(ii) With doubling of *ṭ*: *Vēṇāṭṭ-il*, *ińńāṭṭ-il* (4-6), *Iṭaikkāṭṭ-il* (5-15), etc.

-*ai* stems (with the glide -*y*-): *Ciṟṟāṟṟańkara-y-il* (5-67), *mūlai-y-il* (5-74), *kai-y-il* (2-39), *tiruńaṭai-y-il* (2-103), *Peruńńaṉmalai-y-il* (5-96), *Poṭikkāṭṭuviḷai-y-il* (5-140), *Paḻaiyilai-y-il* (5-152), *Paccai-y-il* (5-184), *Perumai-y-il* (5-189), *Poḻikkaraitturai-y-il* (5-190), *sabhai-y-il* (5-259).

-*a* (*m*) *forms* (with the augment -*tt*-):

Karkkaṭaka-tt-il Viyāḻa-tt-il (1-7), *maṇṭapa-tt-il* (2-73), *tiruńańtāvaṇa-tt-il* (4-4), *Pālelmuṭṭa-tt-il* (5-8), *civita-tt-il* (5-10), *Kiḻappula-tt-il* (5-20), *Āṭṭarava-tt-il* (5-28), *ńila-tt-il* (5-42), *Nakarūrvaṭṭa-tt-il* (5-55), *Ciṟukuṉa-tt-il,* (5-165), *puraiyiṭa-tt-il* (5-254), *ampala-tt-il* (5-279), *patiṉeṭṭirājya-tt-il* (6-7), *cuṟṟumaṇṭapa-tt-il* (7-4).

-*ṇ* stem (with doubling of the final *ṇ*): *Iḷavamaṇṇ-il* (5-77).

-y stems: *elvāy-il* (5-84, etc.), *Muṭṭaikkai-y-il* (5-131).
-r stems: *ūr-il* (5-7), etc.
-l stems: (i) Without change: *Māmpaḻḻippullāl-il* (5-60), *mēlāl-il* (5-212), *kiḻāl-il* (5-214), *Iḷampēl-il* (5-112).
(ii) With doubling of the final -l: *kall-il* (4-20).

13th: -i stems: *tek. . . .ṉṉaṭi-y-il* (1-3), *ñānāḷi-y-il* (1-5).
-a(m) forms (with the augment -tt-): *Viyāḷa-tt-il* (1-1), *Karkaṭaka-ttil* (1-1), *Makara-tt-il* (2-1), *kāla-tt-il* (4-4), *Viriccika-tt-il* (5-1), *civita-tt-il* (5-2), *puraiyiṭa-tt-il* (5-7).

-*uḷ* (termination):

Neut.

10th: -u stem: *yāṇṭ-uḷ* (1-2). -a(m) forms (with the augment -tt-): *maṇṭapa-tt-uḷ* (10-3), *Ciṅka-tt-uḷ* (12-1), *Tulā-tt-uḷ* (13-1).
-r stem: *Tuṭaikkumaṟāyur-uḷ* (4-33).
-l stems: *Kiṭaṅkupaṟāl-uḷ* (9-1), *Paṉaiṅkāviṉkoyil-uḷ* (13-3), *koṭṭil-uḷ* (13-4).
-tt-u (attu) (termination):

Neut

10th: -a(m) forms: *Kolla-tt-u* (2-33), *iṭa-tt-u* (2-33), *eṭa-tt-u* (2-36), *puṉcaippaṭakāra-tt-u* (3-2), *mukkālvaṭṭa-tt-u* (6-11) etc.

11th: -a(m) forms: *mukkālvaṭṭa-tt-u* (6-3), *kāla-tt-u* (8-4).

12th: -a(m) forms: *Kāpālimaṇṇala-tt-u* (1-40), *mukkālvaṭṭa-tt-u* (1-57), *Kolla-tt-u* (2-18), *Tiruvāṉaṅtapura-tt-u* (5-2), *kāla-tt-u* (5-3), *araṅṅa-tt-u* (5-45), *Cārakaveṇpāykuṉṟa-tt-u* (5-99), *Tēvitēvēccuvara-tt-u* (5-203), *Muṭṭakkaṭa-tt-u* (5-207), *cuṟṟumaṇṭapa-tt-u* (5-251), *aka-tt--u* (5-280), *Mittirāṉaṅtapura-tt-u* (7-4), *eṭa-tt-u* (7-7), *oraṭa-tt-u* (8-29).

13th: -a(m) forms: *Tiruvāṉaṅtapura-tt-u* (1-2), *eṭa-tt-u* (1-3), *Iṭapa-Viyaḷa-tt-u* (4-3), *Śraviraperumaṟṟa-tt-u* (4-6), *Nikama-tt-u* (5-7).

Gemination of the final *ṭ* or *ṟ* of -u stems to convey a seventh case meaning: —

10th: *Mēṭaññāyiṟṟu* (11-3), etc.
11th: *Muyirikkōṭṭu* (5-5), *Karkkatakaññāyiṟṟu* (7-1), etc.
12th: *Vēṇāṭṭu* (3-1), *Kuḷakkāṭṭu* (5-7), *Viriccikaññāyiṟṟu* (1-9), *Muttūṟṟu* (1-40).

13th: *Tulāññāyiṟṟu* (2-1), etc.

-akattu (termination):

Neut.

10th: *-r* stem: *Muṇṭaiyūr-akattu* (4-26).
-l stem: *ñālu vātil-akattum* (2-35).

12th: *-r* stem: *-ūr-akattu* (5-192). *-l* stem: *kōyil-akattu* (2-20).

13th: *-a* stem: *Kaita- akattu* (2-3), *-r* stem: *Nikamattūr-akattu* (5-2).

-akatt-iṉ-uḷ (termination):

Neut.

12th: *Kuḷattaḷi-v-akatt-iṉ-uḷ* (5-83).

-el (termination ?):

Neut.

12th: *-u* stem (?): *Pull-el* (5-84), *Perumpull-el* (5-190).

-kāl (*kal*) (termination):

Neut.

10th: *Ciṟuvātil-k-kāl* (2-12). (cf. *vātil-k-kal,* 13: 5-4).

12th: *-i* stems: *cērikkal* (2-61), *Paṉpātiri-k-kal* (4-11).
-u stem (with the augment *-iṉ-*). *Koḻukkoṭṭaimāviṉ-kal* (4-12).
-ai stems: *Uḷaimalai-k-kal* (5-32), *malai-k-kal* (5-107).
-a (*m*) form: *Añtiramāyiṉaṅ-kal* (5-9).
-ṉ stem: *Iṭukkimaṅ-kal* (5-27).
-l stem: *tirukkōyil-k-kal* (3-2).

13th: *-ai* stem: *kuḷaṅṅarai-k-kal* (2-3).
-l stem: *vātil-k-kal* (5-4).

-kal-il (termination) (double locative):

Neut.

12th: *Meyūr-k-kalil* (5-64), *Kuvvūr-k-kalil* (5-28), *Ciṟaiūr-k-kalil* (5-64), *Mevūr-k-kalil* (5-75), *Uḷamalar-k-kalil* (5-116), *Kuvaiūr-k-kalil* (5-109). (Cf. forms like *Toṉrakkal-il* (5-17), *Mutākkal-il* (5-24), *Naṉṉāṭṭukāl-il* (5-136), *Māṇikkal-il* (5-143), etc., where an original locative suffix *kal* (or *kāl*) may be considered to have been permanently incorporated in the stems, the *-il* only being considered as the locative termination).

-kiḻ (termination):

Neut.

11th: *puḷḷi-kiḻ* (1-5)

12th: *-u* stem (with the augment *-iṉ-*): *pañtiranṭ-iṉ-kiḻ* (5-21). *-ai* stems: *tirukkai-k-kiḻ* (2-55), *ciṟai-k-kiḻ* (5-130).

-mēl (termination):

Neut.

10th: *ā<u>n</u>ai-mēl* (2-38).

11th: *-i* stems: *tirumē<u>n</u>i-mēl* (7-2), *pūmi-mēl* (8-5).
-a(m) form (with the augment *-tt-*): *kala-tt-i<u>n</u>-mēl* (8-1).
-l stem (with augment *-i<u>n</u>-*): *kall-i<u>n</u>-mēl* (3-4).

12th: *-a* stem: *kārāṇka-mēl* (5-55).
-i stems: *toḷḷāyiraṅāḻi-mēl* (2-93), *Kurukārtti-mēl* (5-32), *Perumpaḻaññi-mēl* (5-55), *vāyappaṭi-mēl* (5-279), *pūmi-mēl* (7-18).
-u forms: (i) With the augment *-in-*: *Muṅkuvaittirutt-i<u>n</u>-mēl* (5-37). (ii) With gemination of *ṭ* and augment *-i<u>n</u>-*: *Neṭuṅṅoṭṭ-i<u>n</u>-mēl* (5-105), *kiḻattoṭṭ-i<u>n</u>-mel* (5-119), *vittupāṭṭi<u>n</u>-mēl* (5-168), *Koṭṭi-i<u>n</u>-mēl* (5-208).
-a(m) forms (with the augments *-tt-i<u>n</u>*: *ṅila-tt-i<u>n</u>-mēl* (5-54), *kōṇa-tt-i<u>n</u>-mēl* (5-135), *Kaṇṇamaṅṅala-tt-i<u>n</u>-mēl* (5-156).

13th: *-ai* stem: *ta<u>r</u>ai-mēl* (1-6).
-a(m) form (with the augments *-tt-i<u>n</u>-*): *karaippuraiyiṭa-tt-i<u>n</u>-mēl* (1-8).

The most frequent locative termination in all the inscriptions studied here is *-il*, which was also used as a seventh case ending in Early Middle Tamil (cf. *V*, *Vē<u>rr</u>*, 7; *N*, 302; *HGT*, p. 111). Since Old Tamil had no *-il* as a locative ending (cf. *HGT*, p. 111; *EMM*, p. 12), it appears that *-il* was a later development in the Tamil-Malayāḷam group. And since the 10th century Malayāḷam inscriptions have *-uḷ* for the seventh case side by side with *-il*, it is possible to postulate that *-il* was a development out of an earlier *-uḷ* by a process of phonetic shift: *uḷ* > əḷ (through the weakening of *u-*) > əl (the -ḷ becoming *-l* because of the tongue spreading involved in *u* becoming ə) > *el* > *il* (which came to be regarded as the 'correct' form. *Perumpull-el* with the ending *-el* occurring in a 12th century inscription may be taken as a lingering instance of the transitional form. For the change of *u* to *i* in *uḷ* > *il*, the change of the sixth case *uṭaya* > *iṭaya* may be compared. The fact that Old Kannaḍa had an earlier *uḷ* which gradually changed to *oḷ* during the period of the earliest inscriptions, the latter form displacing the former completely by the tenth century, adds point to the above postulation. It is noteworthy in this connection that Old Kannaḍa had an *-e* termination which has been supposed to be from *-oḷ* (cf. *HGOK*, p. 62).

-attu which is the next most numerously occurring termination may be considered as having arisen from *uḷ*. In association with the 'neuter' *-a(m)* forms embodying the inflexional augment *-tt-* (as in *maṇṭapa-tt-uḷ*),

uḷ seems to have lost the weak lateral *ḷ* as a result of the strong accenting of the *-tt-*.[13] This may have given rise to the feeling that *-tt-u* (or *attu*) was a locative suffix, thus enabling its extension to other types of bases also, as in *teruv-attu* (cf. *EMM*, p. 12).

" The use of *attu* with a locative force was quite common in Early Middle Tamil. Malayāḷam inherited this feature and has preserved it wholly down till to-day, while modern colloquial Tamil has ceased to have it." (*EMM*, pp. 12-13.)

Also in forms like *Mēṭaññāyirṟu* and *Muyirikkoṭṭu* which show the gemination of the final *ṟ* or *ṭ* of the base, an original locative suffix *-uḷ* may be postulated. The problem here is parallel to that of *mukkālvaṭṭattu* (< **mukkālvaṭṭattuḷ*) discussed above.

The development of the *-attu* ending evidently gave rise to the form *akattu* (< *akam* + *attu*), which itself came to be felt as a locative ending and is found as such in a few instances; *ūr-akattu*.[14] The double locative *-akattu-iṉ-uḷ* is met with in an instance in the twelfth century.

The post-position *-kal* is derived from the earlier form *-kāl* (cf. *TC*, 82 and N, 302)[15] which occurs in one of the earliest inscriptions selected for this study. (Cf. *EMM*, p. 12.) It is interesting to note the tendency to incorporate *-kal* in the base permanently and add an *-il* to convey a seventh case meaning, as in forms like *Māṇkkal-il* occurring in a 12th century inscription.

The locative is sometimes used with the force of a genitive ; e.g. *eṉṉaiyil pātiyum* (see under Functional Syncretism). It is also used in a qualificatory sense, as in :—*Kōṭikkuḷattil Iravi-kumāraṉ* (10: 7-3), *Ciṟaikkaraiyil mūttavaṉ* (10-9), *mūttakūṟṟil eḻuṅūṟṟuvar* (11: 6-7), *Koppaṟappil Kaṇṭaṉ-kaṇṭaṉ* (12: 6-8), *Kurakkēṇi-k-Kollattu Paṉaiṅkāviṉ-koyilakattu* (12: 2-1/20), *Ceṅṅaḻiṅīrmaṅkalattu puraiyiṭam* (12: 5-235), etc. It may be noted here that by the end of the Old Mal. period this qualificatory type was extended in its use and an *ē* came to be attached to the locative ending,

13. When *uḷ* changed to *il* by the process indicated above, the front vowel *i* seems to have exercised a 'protective' influence over the *l* of *il*, in forms like *maṇṭapa-tt-il* which the back vowel *u* of *uḷ* could not do in regard to *uḷ*.

14. The Tamil seventh case ending *-akam* (cf. *TC*, 82; *N*, 302) may also have contributed to this development.

15. *kaṇ kāl puṟam-akam-uḷḷ-uḻai kīḻ mēl*
piṉ cār-ayal puṭai tēvakai-y-eṉāa
muṉ-ṉ-iṭai kaṭai talai valam-iṭam-eṉāa
aṉṉa piṟavu-mataṉ pāla-v-eṉmaṉār — *TC*, 82.

giving rise to forms like: *kāṭṭilē āṉa, jalattilē-k-kāṟṟu,* etc. (Cf. *EMM*, pp. 16-18).

Functional Syncretism

The phenomenon of syncretism involving the taking over by some case-forms the functions of one or more others[16] is met with in the inscriptions.

nom for acc. (This is the general practice in regard to non-rationals.)

Examples :—

10th: *i-ṅ-ṅakaram* (*kaṇṭu*) (2-4), *āḷkkācu* (*koḷḷa-p-peṟār*) (2-29), *kō-p-patavāraṅ* (*kōyil koṇṭu*) *patippatavāram* (*añcuvaṇṇamum maṇikkirāmamum koḷvatāka*) (2-36-38), etc.

nom. for instr.

10th: (*iruṅāḻi*) *ari* (*tiruvamirtum*) ("with *iruṅāḻi ari*") (8-1), *paṅtiru kalam* (*tiruvakkiramum*) (12-2).

12th: *maṭa* (*ṅāḻi*) (5-59; cf. *maṭaiyāl*, 5-36).

13th: *maṭai* (*eṭṭu ṅāḻi*) (5-4).

nom. for gen. (This is numerously represented.) Examples :—

10th: *Ayyaṉ* (*eḻuttu*) (1-27), *carakku* (*vilaiyiṭum eṭattu*) (2-33), *paṭārar* (*atikārikaḷ*) (11-13), *potuvāḷ* (*kaiyyil*) (13-22).

11th: *Iṭapam* (*kaḻivil*) (3-2), *kīḻvāykēḻppāṉ* (*eḻuttu*) (5-28), *potuvāḷ* (*kaiyyil*) (8-2).

12th: *Kulacekara-kōyilatikārikaḷ* (*tiruvirācciyam*), *perumāḷ ṅaṭai* (2-121), *tirumēṉi* (*kāvalkku*) (5-106), *uvaccakaḷ virutti* (5-113).

13th: *Mahādēvar* (*tiruvuṭampu*) (4-4), *Āticcaṉ* (*eḻuttu*) (4-16).

nom for loc.:

10th: *Ciṟumarakkāṭ-* (*aiṅtūṉippāṭu*) (4-30), *Aiyaṉṟaṭi oḷḷatu* (7-32).

11th: *Paṅkuṉi-uttirattiṉāḷ* (2-2), *palaṅūṟāyirattāṇṭum* (5-75).

12th: *Neṭiyataḷi* (*iruṅtaruḷi*) (1-14), *Putumarakkuḻi* (*muppatu paṟai*) (5-75).

13th *Tiruveḷḷalūr* (*iraṇṭeṭattum*) (2-1).

instr. for loc.:

12th *iṅṅāḷāl* (3-1) 'on this day'.

Loc. for dat.:

10th: *ayyaṭiyil* (*muṉṉe*) (10-3), *aṅtiyil* (*muṉṉaṭuka*) (3-5).

16. Cf. GRAY, *Foundations of Languages*, pp. 19-20 and 201-2.

11th: *paṅtiraṭiyil (mun̲n̲e)* (8-3).

Loc. for gen.:

10th: *puraiyiṭattir̲ (pātiyum)* (4-22), *i-p-pūmimer̲ pātiyum* (12-2).
11th: *en̲n̲aiyil (pātiyum)* (7-2).
12th: *Veḷḷar̲aiviruttiyil añcon̲r̲u* (7-12), *Cenkoṭṭār̲r̲u mēlum kiḻum-oḷḷa* (6-5), *Muṭṭakkaṭattu paṭakāram* (5-207).[17]

Appendix to Chapter II

Līlātilakam on Malayāḷam Inflections

Līl., II, sūtra 11: pēr-e-y-ōṭu-kku-ñin̲r̲-uṭe-y-il viḻity-aṣṭakam.

Commentary : *atra prathamāṣṭamāvārthau. anye śabdāḥ*

1. *tatra prathamaḥ parabhāgaviśeṣō yathā:—kaṇṭan̲, ān̲a, maram. atra prātipadikamātramēvārthaḥ; tadeva pērityucyate; tasya nāmaśabdavācytvāt.*

2. *dvitīyō yathā:—avan̲, avaḷe, atin̲e, avare, avar̲r̲e, ānaye, maratte marattin̲e. aty ekārō hrasvaḥ. aikārastu pāṇḍyabhāṣāyāmeva. tatra 'vēr̲r̲umai' ityaikārasya dvitīye kathanāt. iha -tt-, -in̲-, -y-, ityādayō varṇā madhye āpatantassandhāyakā bhavanti. yathā pāṇḍyabhāṣālakṣṇe 'cāriyai' iti kecidvarṇāḥ. atra punaḥ e ityasya nirvartyavikāryaprāpyātmakam karmārthaḥ. natu kālādhvātyantasamyōgādikam. nacōpapadāpekṣā. divasatte ñin̲r̲ān̲, grāmatte āvasikkun̲r̲ōn̲, ñētratte kuruḷeyum ñaṭuvē cilli ityādi na yujyate; asadbandhāt.*

3. *tṛtīyō yathā:—avar̲r̲ōṭu, avarōṭu, nampiyōṭu, marattōṭu. atrāpi 'kāñtan̲ōṭutsukam' ityādi na bhavati. sandhāyakā varṇāḥ svayam draṣṭavyāḥ ōṭ-ityupalakṣaṇam. āl, koṇṭu ityētāvapyatra bhavataḥ. avan̲āl, atin̲āl, avan̲ekkoṇṭu, avar̲r̲ekkoṇṭu, maratte-k-koṇṭu. atra ekārassandhāyakaḥ; na dvitīyā bhāṣāvibhaktiḥ.*

4. *caturthō yathā:—avaḷkku, ān̲akku. atra an̲n̲u, in̲n̲u ityetāvapi bhavataḥ. avan̲n̲u, atin̲n̲u,ivar̲r̲in̲n̲uete trayōpi kvacit āyikkoṇṭu ityanēna yujyate. yathā:—avan̲n̲āyikkoṇṭu, avar̲r̲in̲n̲āyikkoṇṭu atrāpi sandhāyakā draṣṭavyāḥ. 'kāñtan̲n̲u kōpikkin̲r̲itu kāñta' ityādikam tu vikṛtam.*

17. For a discussion of the phenomenon of syncretism in Old Tamil, see the chapter on 'Vēr̲r̲umai Mayaṅkiyal' of *Tolkāppiyam, Collatikāram. sūtra* 100 of the chapter is specially interesting, for it sanctions the use of the seventh case in a sixth case (qualificatory) sense in forms like *kāṭṭin̲kaṇ yān̲ai,* which practice evidently was developed into the Malayāḷam phrasal units of the type *kāṭṭilē ān̲a.*

5. *pañcamō yathā:—marattilńiṉṟu, marattiṉmēlńiṉṟu, avaḷpakkal ńiṉṟu. kāṭṭilityapi bhavatyutkarṣāpakarṣe — kamalattekkāṭṭil mukhamaḷakiyatu. atrāpi sandhāyakāḥ. svayam draṣṭavāḥ. avaṅkalńiṉṟu payaṟṟi, puliyiṅkal-ńinṟu pēṭiccu ityādi na yuktam.*

6. *ṣaṣthō yathā:—avaṉuṭe, avaḷuṭe, ilayuṭe. atra iṭe ṟe ṉṉu ityete ca bhavanti. avaḷiṭe, avariṭe, avaṉṟe, māviṉṟe, avaṉṉu, rāmaṉṉu. sandhāyakā draṣṭavyāḥ. kāṇkekku pōyi, maraṅṅaḷuṭe, māviṉṟe ityādi na yuktam; abhimatārthā pratīteḥ.*

7. *saptamō yathā:—avaṉil, avaḷil, atil, ile, mēl, kal, ityete ca bhavanti. avaṉile snēham, marattiṉmēl, ōkiṅkal. udikkiṉṟa ādityaṉil piṟaṉṟāṉ ityā-dyayuktam.*

8. *aṣṭamaḥ:—ādīdūdōdantaḥ. mādhavā, keśavā, nampī, kaṇṇī, cārū, citrabhāṉū, ivaṉē, ivaḷē, maramē, vaṭiyē, ityādi. atra ēkārō dīrghaḥ.*

CHAPTER III

Pronouns

Personal, Reflexive, Demonstrative and Distributive pronouns are found in the inscriptions. These are declined in the same way as the nouns. Only the third person forms of the personal pronouns and the demonstrative pronouns show gender difference. Syntactically there is no difference between the noun and the pronoun.

The following points about the pronouns are specially noteworthy :—

1. The characteristic Mal. first person sg. *ñāṉ* is not met with in the inscriptions, which show only *ńāṉ*. It may be noted here that Old Tamil shows *yāṉ* while Middle Tamil has *ńāṉ* beside older *yāṉ* (Cf. *EMM*, p. 35).

2. The third person pronoun and the remote demonstrative pronoun are the same.

3. The form *avarkaḷ* is used as the third person (masc.) plural. It may be mentioned here that *avarkaḷ* was a peculiarity of Middle Tamil, Old Tamil having only *avar* as the corresponding epicene plural (Cf. *HGT*, p. 135).

4. The oblique form of the reflexive is used with a genitive force, as in (10th) *taṉ paṇi, tam vaṇṭi*. A reflexive distributive is obtained by doubling the oblique form, as in (11th) *tattamakku*.

5. The neuter plural forms *avai* and *ivai* may be regarded as developments of earlier *av* and *iv*. The plural form *ivu* occurring in a 12th century inscr. lends support to this view. (Cf. *EMM*, p. 33.)

6. The inflexional increment -*ṟṟ*- is usually embodied in the case of neuter plural forms before affixing the case terminations (e.g., 12th : *avaṟṟai, avaṟṟiṟku*), though forms like *avai* (11th: neut. acc. pl.) are also occasionally met with.[1] The masc. pl. (nom.) avakaḷ is used as neut. pl. (gen.) in one instance in the 10th century.

1. "While the plurals *av*(*a*) and *iv*(*a*) had always the augment -*aṟṟ*- in inflexional endings in Old Tamil, the practice of optionally dropping this augment in the inflexional forms of the plural bases appears to have cropped up in the Middle Tam. stage, since forms like *avai-y-ōṭu* occur in Middle Tam. This optional practice exists in Mal. also from the earliest literary period; and in the modern colloquials, Mal. generally drops the augment in the inflexional forms of these bases." (*EMM*, p. 33).

7. The proximate demonstrative *itu* appears as a mere expletive after finite tense-forms which have no personal endings e.g. *uvaccakaḷ eḻutitu* (11: 1-6).

8. There is no intermediate demonstrative of the *u*-type in the inscrr. It may be noted here that 'Old Tamil intermediate demonstratives on an *u*-basis ceased to be active in the Middle Tamil period.' (Cf. *EMM*, p. 33).

9. There are no relative pronouns in Malayāḷam as in other south Dravidian languages. The adjective or relative participle does the duty of a relative pronoun as well. E.g. *ceyta karumam.*

10. By affixing pronominal terminations to relative participles, participial nouns are formed. E.g. *koṭutt-avaṉ*.

I. Personal Pronouns

(i) *The first person :*

		sg.	pl.
10th :		*ṅāṉ* (1-11)	
	nom.	*ēṉ*² (12-6)	

(*Iravi-kuṉṟappoḻaṉ-ēṉ*, 'I, Iravi-kuṉṟappoḻaṉ')

		sg.	pl.
12th :			
	gen.		*ṅammuṭaiya* (5-273)

(ii) *The second person :*

no examples

2. Caldwell holds the view (*Comparative Grammar*, pp. 259-62) that *yāṉ* represents the oldest form of the Dravidian first person pronoun and that *yāṉ* changed into the Tamil *ṅāṉ* through the middle stage *ñāṉ* (which is preserved in Malayāḷam). He considers *āṉ* (andēṉ) as secondary forms. A. R. Rajaraja Varma thinks (Kēraḷapāṇinīyam, p. 165) that * *eṉ* is the oldest form of the pronoun and that it developed into *ñāṉ* by the process : *eṉ* > *ēṉ* > *yāṉ* > *ṅāṉ* > *ñāṉ* . Jules Bloch also appears to take a similar view. He observes (*Structure grammaticale des langues dravidiennes*, p. 24): "On peut poser * *en-* pour l'oblique. Le cas direct ancien est-il * *ēṉ* ou * *āṉ* ? Le premier pouvant être analogique, on pencherait plutôt pour le second. Quant à l'initiale du tulu, on pourrait la considérer comme secondaire et provenant de l'oblique, si la notation *ye-* à l'oblique tulu n'était phonétique plutôt que phonologique (en tamoul aussi, et ailleurs, *e-* initial se prononce *ye-*) et l'explication ne vaudrait pas en tout cas pour le tamoul oú *yāṉ* et la forme archaique, supplantée postéricurement par *ñāṉ*, pui *ṅāṉ*. Il y a là un fait de phonétique obscur : le tamoul hésite entre *ār* et *yār* 'qui', entre *āṉai* et *yāṉai* 'éléphant', (te. *enuka*) *āṇṭu et yāṇḍu* 'annèe' (te. *eṇḍu*); il a *yātu* 'quoi' en face de *etu*. En tamoul *yā-* fonctionne donc en certains cas comme la longue de *e-*. D'autre part on a signalé dans le *Kalittokai*, en regard de *ñ-āy* (*ñ-* de **nī*) 'ta mère', *y-āy* 'ma mère', oú l'on peut voir le démonstratif rapproché (plutôt qu'une forme du pronom personnal, car *i* comme on verra est la voyelle caractéristique du pronom de 2e personne); l'initiale de *yāṉ* pourrait provenir de lá." etc. For the postulate *ē* * *eṉ* > * *yēṉ* > (Tam.) *yāṉ* > *ñāṉ* > *ṅāṉ* see also C. R. Sankaran, "Reconstruction of the Proto-Dravidian Pro-

(iii) *The third person* :

		sg.	pl.
Masc.			
10th :			
	nom.	*avan̲* (6-75)	*avar* (3-4)
			avakaḷ (4-48*)[3]
			avarkaḷ (6-102*)
			avaraḷ (9-2*)
	acc.	*avan̲ai* (13-8*)	
	dat.	*avan̲ku* (13-16)	*avakaḷkku* (12-5)
	gen.	*avan̲*[2] (6-79)	*avakaḷ* (4-51)
11th :			
	nom.	*avan̲* (7-1)	*avaraḷ* (1-5)
	acc.		*avarai* (7-3*)
			avakaḷai (7-3*)
	instr.		*avakaḷāl* (7-3)
	dat.	*avan̲ku* (1-4)	*avarkku* (1-3)
		avan̲n̲(u) (7-1)	*avarkaṭkku* (2-5)
		avan̲ukku (7-3)	
	gen.	*avan̲*[4]	
		sg.	pl.
	nom.	*avan̲* (5-82*)	*avar* (5-272)
			avaraḷ[1] (6-3)

nouns", *BDCRI* 1. 96-105, especially pp. 96-8, and K. Godavarma, "Dravidian Pronouns of the First and Second Persons", Tenth All-India Oriental Conference (1940) Summaries of Papers, p. 161.

Apparently, as L. V. Ramaswami Aiyar puts it cautiously, *ñān̲* may have been a west coast archaism (cf. *EMM*, p. 35), and the problem of the origin of *ṅān̲* and *ñān̲* could be solved satisfactorily only on discovering more conclusive data. It may be noted in this connection that the oldest Kannada inscriptions show *ān* (nom.) and *enage* (dat.) in the singular and *namage* (dat.) *emma*, *nammā*, and *nam* (gen.) in the plural. It is also interesting to note that the earliest Kannaḍa grammarian Nāgavarma states that *en* become *ān* in the nominative. (See A. N. Narasimhia, A Grammar of the Oldest Kanarese Inscriptions, pp. 175-76). K. Kanapathi Pillai holds the view that * *ñān̲* may have been the form of the personal pronoun in the pre-Tolkāppiyam period, and that it was probably from this that *yān* and *ṅān* developed (see "Palatal nasal *ñ* in Tamil", *University of Ceylon Review*, 1.69).

2. The star after the number indicates that the form is the pronominal termination of a participial noun.

4. From the point of view of general linguistics it is interesting to note here the identity of the nom. sg. and gen. sg. of -o stems in the earlier phase of Indo-European (or Indo-Hittite). This phenomenon seems to present itself in Dravidian also, e.g. *paṭārar (atikārikaḷ)* (10: 11-13) beside *paṭārar-uṭai (ṅāḷ)* (10: 6-13). Further, this identity is met with in Dr. in the case of the third person ('rational') pronoun also. See in this connection, C. R. Sankaran, "The old genitive singular of Indo-European -o-stems," *K. V. Rangaswami Aiyangar Commemoration volume*, 437-38.

	dat.	*avaṉṉu* (5-100*)	*avaraḷkku* (5-44)
			avarkku (5-272)
	gen.		*avaraḷ* (4-30)
			avariṭaiya (5-3)
13th :			
nom.			*avaraḷ* (5-3*)
acc.			*avarai* (5-10*)
		no examples.	
Fem.			
Neut.			
10th :			
	gen.		*avakaḷ* (9-1)
loc.		*atil* (2-30)	
11th :			
	acc.	*atu* (1-5)	*avai* (1-3)
12th :			
	acc.	*atu* (5-5*)	*avaṟṟai* (5-119)
	dat.	*atiṉṉu* (4-15)	*avaṟṟiṟku* (2-124)
13th :			
	nom.	*atu* (3-3*)	

II. *The Reflexive Pronoun:*

10th :			
	nom.	*tāṉ* (7-14^{4})	*taṅkaḷ* (2-47)
	instr.		*taṅkaḷaikkoṇṭē*[5] (2-47)
	gen.	*taṉ* (1-1^{2})	*tam* (1-15^{2})
		taṉṉuṭaiya (4-4)	*taññaḷ* (2-46)
11th :			
	nom.		*taññaḷ* (*ēy*) (8-5)
	dat.	*tattamakku* (8-3) (distributive)	
	gen.	*tāṉ*	
12th :			
	nom.		*tām* (*ē*) (5-270)
13th :			
	nom.		*tām* (5-6)
	dat.		*taññaḷkku* (2-1)

III. *Demonstrative Pronoun.*

(*i*) *Remote* :

Masc.

10th :

5. The *t*- of *taṉ* sometimes changes to *ṟ in* sandhi contexts.

	nom.	*avaṉ* (6-75)	*avar* (3-4)
			avakaḷ (4-48)
			avarkaḷ (6-102)
	acc.	*avaṉai* (13-8)	
	dat.	*avaṉku* (13-16)	*avakaḷkku* (12-5)
	gen.	*avaṉ* (6-79)	*avakaḷ* (4-51)
11th :			
	nom.	*avaṉ* (7-1)	*avaraḷ* (1-5*)
	acc.		*avarai* (7-3)
			avakaḷai (7-3)
	instr.		*avakaḷāl* (7-3)
	dat.	*avaṉku* (1-4)	*avarkku* (1-3)
		avaṉṉu (7-1)	*avarkaṭkku* (2-5)
		avaṉukku (7-3)	
	gen.	*avaṉ*	
12th :			
	nom.	*avaṉ* (5-82)	*avar* (5-272)
			avaraḷ (6-3)
	dat.	*avaṉṉu* (5-100)	*avaraḷkku* (5-44)
			avarkku (5-272)
	gen.		*avaraḷ* (4-30)
			avariṭaiya (5-3)
13th :			
	nom.		*avaraḷ* (1-6)
	acc.		*avarai* (5-10)
Neut.			
10th :			
	gen.		*avakaḷ* (9-1)
	loc.	*atil* (2-47)	
11th :			
	acc.	*atu* (1-5)	*avai* (1-3)
12th :			
	acc.	*atu* (5-5)	*avaṟṟai* (5-119)
	dat.	*atiṉṉu* (4-15)	*avaṟṟiṟku* (2-124)
13th :			
	nom.	*atu* (3-3)	

(ii) *Proximate :*

Masc.			
10th :			
	nom.	*ivaṉ (um)* (6-85)	*ivar* (1-8^{2})
		ivaṉ (ē)	*ivakaḷ* (1-7)
			ivar (2-49^{2})
			ivarkaḷ (12-5)

acc.		*ivakaḷai* (1-18^{3})
social		*ivakaḷai-k-kūṭiyē* (2-34)
dat.	*ivaṉṉū* (4-53)	*ivakaḷkku* (2-25^{4})
gen.		*ivakaḷ* (12-6)
11th :		
nom.	*ivaṉ* (5-14)	*ivakaḷ* (7-1)
dat.	*ivaṉṉ(u)* (7-1)	
gen.	*ivaṉ* (5-6)	*ivarkaḷ* (6-17)
loc.		*ivakaḷil*
	no examples:	
Fem.		
Neut.		
10th :		
nom.	*itu* (12-7)	*ivai* (4-12^{7})
acc.	*itaṉai* (6-61)	*ivai* (4-9^{3})
instr.		*ivaikoṇṭu* (3-3)
		ivaiyiṟṟāṟ (5-7)
dat.	*itiṉukku* (11-5)	
	itaṟku (12-5)	
loc.	*itiṉil* (6-92)	*ivaiyiṟṟiṉil* (5-7)
		ivayiṟṟil (5-12)
11th :		
nom.	*itu* (3-4^{2})	
acc.	*itu* (3-3)	
dat.	*itakk* (-*aṟivaṉ*) (6-21) (dat. with the force of acc.)	
	itiṉṉ(u) (7-1)	
	itiṉikku (7-3)	
12th:		
nom.	*itu* (6-7)	*ivu* (5-55)
		ivai (6-8)
acc.	*itu* (5-284)	
instr.		*ivaṟṟāl* (5-256)
social	*itaṉoṭu* (5-248)	
dat.		*iviṟṟiṉṉu* (5-54)
13th:		
nom.		*ivai* (1-12^{2})
dat.	*itiṉṉu* (5-6)	

IV. The Distributive Pronoun.

11th:	*tattamakku* (8-3)

CHAPTER IV

ADJECTIVES

Adjectives of the following types are found in the inscriptions: (1) Root-forms which are by nature adjectives, such as *cem, ciṟu,* etc.;[1] (2) adjectives derived from verbal roots, nouns and particles; (3) demonstrative adjectives; (4) adjectives of totality; (5) adjectives of quantity; (6) numeral adjectives; (7) participial adjectives; and (8) nominal forms which function as adjectives by standing before other nouns.[2]

When the adjectival form is used attributively it precedes the noun it refers to and when it is used appositionally it follows the noun; e.g.*ṅaṟu-*(*ṅey*) and (*uḷḷa ṅāḷ*) *ellām.*

1. *Forms which are by nature adjectives:*

10th: *ciṟu*: *ciṟukoṭṭār-eṭṭu paṅku* (5-11).
cem: *cem poṉ* (5-24).
peru: *perumakkaḷ* (13-4).

11th: *cem*: *ceṅ-kōl* (5-2), (Skt.) *itara*: *itars vaḻiyāl* (8-2).

12th: *puttaṉ* (<*putu*): *puttan aṟaiyāl* (2-24); *cem*: *ceṅ-ṅel* (2-82); *ceṟiya* (<*ciṟu*): *ceṟiyakaṭai* (3-1).
ṅaṟu: *ṅaṟu ṅey* (5-170).

13th: *peru*: *peru amirtu* (1-9), *pacce* (< *pacu* ?): *pacce-p-paiṟu* (2-2).

2. *Adjectival forms derived from nouns, etc.:*

10th: *muṟṟu* (< *muṟṟu-*, 'to become complete') *muṟṟu ṅāḷ* (5-3).
maṟṟu (<*maṟṟu*, particle meaning 'other, another'): *maṟṟoruttark-kum* (6-80), *maṟṟai-p-pātikkum* (12-2), *maṟṟa kōyilatikāri-kaḷkku* (12-4).
muṉṉam 'abovementioned' (<*muṉ*): *muṉṉam kōyiṟku* (6-53).

11th: *āṭṭai* 'annual' (< *āṇṭu*, n.) *āṭṭai-k-koḷ* (3-3).
kīḻ, '*lower, subordinate*' (<*kīḻ*, n.): *kīḻppaṭaiṅāyakam* (5-26).
maṟṟu: *maṟṟ-oḻiññа eṉṉai* (7-2).
maṟṟ-oru pūmiyāl (8-5).
itara 'different' (< Skt. *itara*, n.) *itara vaḻiyāl* (8-2).

1. It is interesting to note here that Tamil grammatical tradition does not accord an independent status to adjectives: it always derives them from a noun or a verb. E.g. *cem* and *ciṟu* are regarded as derived from *cemmai* and *ciṟumai* respectively.

2. By the term 'noun' it is a 'substantive' (as JESPERSEN would prefer to call it) which is meant here. (See O. JESPERSEN, *The Philosophy of Grammar*, p. 72.)

12th: *mēl* 'upper' (*mēl*, n.): *mēl-p-pāti* (6-6), *mēl-c-ciṟuveṟu* (5-116), *mēl-c-cānti* (8-15), *mēl-k-kōṇa* (*m*) (5-135).
kīḻ: *kīḻ-c-cāntivirutti* (5-69), *kīḻ-c-Ciṟuveṟu* (5-116).
iṭai 'middle' (< *iṭai*, n.): *iṭai-c-Ciṟuveṟu* (5-116).
āriya (< Skt. *ārya*, n.) *āriya brāhmaṇar* (2-33).

3. *Demonstrative adjectives:*[3]

10th: Remote: *a* (*k-kuṭikk-*) (1-7) *a-* (*vv-āṇṭu*) (4-3).
Proximate: *i-* (*vv-āṇṭu*) (1-3), *i-* (*ń-ńālu kuṭi*) (1-12), etc.
11th: Proximate: *i-* (*t-taṇṭam*) (1-5), *i-* (*c-ceppeṭṭil*), *i-c-coṉṉa* (7-1), *i* (*-vv-opātiyāl*) (7-2), *i* (*-p-paṇi*) (7-2), etc.
12th: Remote: *a-* (*c-cērikkāl* (2-61).
Proximate: *i-* (*ń-ńāṭuvāḻkkaiyāṉ* (2-47), *i-* (*vv-āṇṭu*) (2-76).
i- (*vv-ūr*) (2-93), *i-* (*p-perumāḷ*) (2-121), etc.
13th: Proximate: *i-* (*ń-ńel*) (1-10), *i-k-kollam* (4-3), etc.
Remote: *aviṭe* (2-2; < *a-vv-iṭam*).

4. *Adjectives of totality:*

Forms expressing the idea of totality may be called 'adjectives of totality'. Strictly speaking, according to this view, the forms expressing number as well as those expressing quantity (which have been classified here separately as 5 and 6) should be brought under this head. The terms *ellām*, *ittaṉai*, and *pala*, which have been classed here as adjectives of totality, may be called 'indefinite totalizers' using SAPIR's terminology.[4] The numerals may be called 'definite totalizers' and the forms for expressing quantity such as *oru palam*, etc., may be called definite totalizers of specialized type.[5]

The forms expressing ideas of totality, including number and quantity, (which should be called 'nouns' from a wider point of view; cf. JESPERSEN, *The Philosophy of Grammar*, pp. 72 ff.) take case terminations when they follow the substantives they refer to.

10th: *ittaṉai*: ....*cāntikkum, tāraikkum, Ayyaṉukkum ittaṉaikkum amaiñca pūmi* (6-40); *ńiccaṉaṭai ittaṉaikkum* (6-60), *ippūmi ittaṉaiyilum* (6-44).
ellām: *uḷḷa ńāḷ ellām* (1-21).
pala: *pala ńūrāyirattāṇṭum* (1-1).
11th: *pala*: *pala ńāḷ* (7-2).

3. According to sandhi rules (see p. 34) after *i* and *a* the initial consonant of the following noun is doubled; if the noun begins with a vowel, the euphonic *-v-* is inserted and is usually doubled.

4. Cf. E. SAPIR, Totality, Language Monograph No. 6 (1930), p. 15.

5. Ibid. See also C. R. SANKARAN and A. C. SEKHAR, "Totality, re-examined from the Dravidian standpoint", *BDCRI*, 6. 138-40.

5. *Adjectives of quantity:*

10th: *kuṭi: oru kuṭi vaṇṇār* (1-12).
tuṭavu: oru tuṭavu ńey (3-4).
uḻakku: uḻakku ńey (3-6).
mūḻakku: mūḻakku ńey (3-7).
kaḻañcu: ńūṟṟu-k-kaḻañcu poṉ (4-52).
kāṇam: añcu kāṇam poṉ (6-55).
tulām: iru tulām puḷi (7-14).
uri: uri ńey (8-1).
ńāḻi: iru ńāḻi ari (8-1).
ńāḻiyuri: ńāḻiyuri tiruvakkiram (9-1), *ari ńāḻiyuri* (5-2).
kayyu: kayyu puḷi (11-8).
kalam: ńālppattiru-kalań-ńel (11-13).

11th: *ńāḻi: ńāḻi ari* (4-2).
pāti: pāti-c-cōṟu (6-12).
kāṇam: āṟarai-k-kāṇam poṉ (6-20).
kaḻaññu: ńūṟṟu-kaḻaññu poṉ (7-3).
paṟai: īrāyiram paṟai ńel (8-1).
kulai: iraṭṭai kulai vāḻakkāy (8-3).
palam: iru palamceytu puḷi (8-3).

12th: *kalam: ńālppatiṉ kalam ńel* (1-18); *āṭṭaikkoḷ ńārpatiṉ kalam* (1-33).
ńāḻi: ńūṟṟu ńāḻi ńel (2-105); *ńey ńāṉāḻi* (5-168).
kuṟuṇi: eḻu kuṟuṇi aññāḻicce ńel (4-26).
paṟa(i): ńel ńūṟu paṟa (5-6), *ńel pańtiru paṟai* (5-8).
tūṇi: oru tūṇi (5-14).
kuṭi: ńālu kuṭi vāṇiyar (5-39).
palam: ńūl pańtiru palam (5-51).
uri: iṭańkaḻiyāl ńāḻi uri (5-86).
kaḻaiññu: pańtiru kaḻaiññu poṉ (5-255).
kāṇam: iranṭarai-k-k-āṇam poṉ (5-267).
āḻakku: aruńāḻi uri āḻakku (5-73).
uḻakkāḻākku: ńel patiṉ oru paṟa iṭańkaḻiyāl uḻakkāḻākku (5-75).

13th: *ńāḻi mūḻakku: tirumotu ńāḻimūḻakku* (2-2).
ńāḻi: ari ńāḻi (5-5).

The particles *ceytu, cce* or *cca* (*ceytu* > *ccey* or *ccai* > *cce* > *cca;* cf. *PMP,* V) are suffixed to adjectives of quantity to denote customary quantity. Examples (12th): *ōrō paṟai-c-ceytu ńel* (2-28), *muńńāḻicce ariyikku* (4-24), *eḻuńāḻi uricce ńel* (4-25), *eḻu kuṟiṇi aññāḻicce ńel* (4-26), *iruńāḻicca ńeyyamirtum* (5-40), *ńāḻicceyt-ari* (6-4).

6. *Numeral adjectives :*

Numerals function as adjectives by standing either before or after the substantives they refer to. In the latter case they take case terminations. Examples : (i) Numerals occurring before the substantives-:

10th: *pala ńūṟāyiratt-(āṉṭum)* (1-5), *ńālu (kuṭi)* (1-7), *oru (vaṇṇārak-kuṭiyum)* (1-8), etc.

11th: *oru (ńańtāviḷakku)* (6-4), *iranṭu (paṟai)* (2-2), *iru (ńaḷi)* (7-2), etc.

12th: *oru (tūṇi)* (5-14), *oru (ńāḷ)* (5-262), *iru (ńāḷi)* (2-118), etc.

13th: *oru (brāhmaṇar)* (1-5), *iranṭu (eṭattum)* (2-1), *iru (ńāḷi)*, etc.

(ii) Numerals occurring after the substantives. Examples:

10th: *cellāṉiṉṟa yāṇṭu aińtu* (1-3), *yāṇṭu patinēḻu* (3-1), etc.

12th: *paṇam ńāliṉṉum* (8-21), *aḷakaccu patiṉaiñciṉṉum* (8-21), etc.

Examples of ordinal numerals used as adjectives :

10th: *ńālām (āṇṭu)* (6-5), *ńālāyirattampattorām (-āṇṭu)* (8-1), *ayyā-māṇṭaikketirām (-āṇṭu)* (11-2), etc.
(See under numerals for more examples.)

7. *Declinable participles as adjectives :*

Past participles :

10th: *(Eśo-da-Tapir-āyi) ceyvitta (Tarisāppaḷḷi)* (1-6), *(Ayyaṉaṭikaṭiruvaṭi) kuṭutta (viṭupēṟāvatu)* (1-6), *(cempupattirattil) paṭṭa (paritu)* (1-22), etc.

11th: *peṇmakkaḷai-k-koṇṭa (marumakkaḷ)* (5-18), *ceyta (kāriyam)* (6-3), etc.

12th: *ceṉṟa (ńāḷ)* (2-9), *(Viyāḷam) ńiṉṟa (Miṉañāyiṟu)* (3-1), *vaicca (ńel)* (1-87), *aruḷiya (mārkkamē)* (1-68), etc.

13th: *koṭutta (mutal)* (2-3), *ceyta aṭṭilpperṟōlaikkaraṇam* (2-1), etc.

Present participles :

10th: *āḷāṉiṉṟa (yāṇṭuḷ)* (1-2), *aṟiyum (cātukkaḷ)*, etc.

11th: *cellāńiṉṟa (yāṇṭu)* (7-1), *paṇiceykiṉṟa (Kuṉṟaṉ-kōvińtaṉ)* (1-2), *amaiccuḷḷ- (uṟuti)*, (3-3), etc.

12th: *oḷḷa (kuṭipatikku)* (1-41), *kuṭi-irukkiṉṟa (puraiyiṭattil)* (5-254), etc.

13th: *oḷḷa (Ceyyamaṉṉum)* (1-7), etc.

Future participles:

10th: *(maṇai mēyppāṉ) koḷḷum (iṟaiyum)* (1-9), *vilaiyiṭum (iṭattu)* (2-33), *koṭukkum (ńel)* (5-1), etc.

11th: *varuń (tuppu)* (7-3), etc.

12th: *Kuṟaińokkum (ńāṅkuṭi, etc.)* (5-254), *aḷavutaruń (-ńel)* (8-25) etc.

In *cēkōppaṇi* (12: 8-36) the form *cēkō*, apparently from the relative participial form *ceyva* (< *ceyvava* or *ceyvatu*), has come to possess an adjectival sense (cf. *TAS* 2. 49; *EMM*, p. 83).

A relative participle is used in an adjectival sense when describing location, such as in modern Malayāḷam. Example: (*Paṟaiyaṉkarikk*) *aṭutta* (*kiḻakkil oḷḷatu*) (7-40).

8. *Nominal forms as adjectives:*

(i) A noun or a participial noun is used in an adjectival relation to another to which it is in apposition by affixing the past relative participle *āṉa* or *āyiṉa* to it.[6] Examples : —

10th: *Catiracikāmaṇi āyiṉa kiḷāyaṭikaḷ* (11-4), *ñīrēṟṟavarum āṉa Sapir Iśo* (2-50), etc.

11th: *Kuñcikkuṭṭavarmmaṉ āyiṉa aṭikaḷ* (6-6), *Vāsutēvaṉ-āyiṉa Nelkkuṉṟaṭikaḷ* (6-15), etc.

12th: *Irāmar-tiruvaṭi kōyilatikārikaḷ-āyiṉa Śrī-Kulacēkara cakkiravarttikaḷ* (2-15), *Vikkiramaṉ-āṉa . . . . kkaṉ* (2-50), etc.

(ii) A substantive with the locative ending *-il* or *-attu* is often used in an adjectival relation to another. Examples:—*Kōṭikkuḷattil Iravikumāraṉ* (10: 7-3), *Mūḻikkaḷattu kaccam* (10: 8-2), *Kopparappil Kaṇṭaṉ Kaṇṭaṉ* (12: 6-8), *Kurakkēṇikkollattu Paṉaiṅkāviṉkoyil* (12: 2-17/20), etc. (See pages 78-80).

(iii) A substantive is used in an adjectival sense by merely prefixing it to another. Examples (10th): *ko-t-Tāṇu Iravi* (1-1), *Puṉṉaittalai-p-pati* (2-10), *Tiruvāṟṟuvāy sabhai* (3), *Āvaṇi-y-ōṇam* (3-2), *palippuṟam ñivedyam* (4-45), *Mūḻikkaḷa vyavastai* (4-50), etc., etc.

6. Cf. CALDWELL, *Comparative Grammar*, p. 211; ARDEN, *Grammar of Common Tamil*, p. 287.

CHAPTER V

NUMERALS

Most of the numerals found in the inscriptions are written in words. The few figures which occur closely resemble the modern Malayālam figures, and they insert the sign of a thousand after the number of thousands and the sign of hundred after the number of hundreds like the older form of Tamil numeration, (cf. ARDEN, *Tamil Grammar,* p. 115).

All the cardinal numbers except *o<u>n</u><u>r</u>u* can stand before or after the substantives they refer to. *o<u>n</u><u>r</u>u* can be used only after the substantive; when the number precedes the substantive it appears as *oru* or *ōr,* which is evidently its basal form.[1] But the bases of the numbers from two to eight as well as their full forms (which are usually considered as neuter nouns of number)[2] can occur before a substantive. In combinations wherein these numbers stand first, however, only the basal forms are used.

pattu sometimes takes the form *pati<u>n</u>* when it precedes a noun, as in *pati<u>n</u> kalam* (10th). In combinations only *pati<u>n</u>* is used.

When followed by other numbers *ṅūru* becomes *ṅū<u>r</u><u>r</u>u.* Occasionally *ṅū<u>r</u><u>r</u>u* is used as the adjectival form, as in *ṅū<u>r</u><u>r</u>u ṅāḻi* (11th). Similarly *āyiram* becomes *āyirattu* in combinations.

The form *aiṅtu* occurs side by side with the form *añcu* in the earliest inscriptions. The former is earlier and becomes progressively less frequent (see under Phonology, pp. 25-26).

The following is a list of the numerals found in the inscriptions studied here. The full form of the numerals is given wherever available. In the other cases the short form is given with the minimum of context where necessary.

10th: *o<u>n</u><u>r</u>u,* 1 (5-3); *iraṇṭu,* 2 (2-1); *mū<u>n</u><u>r</u>u,* 3 (5-4); *ṅālu,* 4 (1-7); *aiṅtu,* 5 (1-3) also *añcu* (6-5); *eḻu* (*kalam*), 7 (4-9); *eṭṭu,* 8 (2-30); *o<u>n</u>patu,* 9 (12-13); *patin* (*kalam*), 10 (3-2); *pati<u>n</u>oru,* 11 (4-12); *paṅṅiraṇṭu,* 12 (5-10) also *paṅtiraṇṭu* (12-7); *pati<u>n</u>mu* (*-t-tūṇi*), 13 (4-25); *pati<u>n</u>aiñcu,* 15 (4-5); *pati<u>n</u>ā<u>r</u>u,* 16 (4-57); *pati<u>n</u>ēḻu,* 17 (13-1); *irupattaiṅ* (*kaḻaiñcu*), 25 (5-23); *irupattā<u>r</u>u,* 26 (5-21); *muppattiru,* 32 (7-43); *muppattumu*

1. Cf. CALDWELL, *Comparative Grammar,* p. 217.
2. Ibid. p. 216; ARDEN, *Tamil Grammar,* p. 116; *HGOK,* p. 71.

(*p-paṟai*), 33 (7-13); *muppattaṟu* (*kaḻaiñcu*), 36 (4-89); *ńāṟpatu*, 40 (4-44); *ńāṟpattiru*, 42 (4-53) also *ńālppattiru* (11-3); *aimpatu*, 50 (4-34); *aimpattiru* (*kaḻaiñcu*), 52 (9-2); *aimpattuńālu*, 54 (3-3); *eḻupattiraṇṭu*, 72 (2-39); *ńūṟṟirupattumūṉṟu*, 123 (3-2); *iruńūṟu*, 200 (13-10); *muńńūṟṟaṟupatu*, 360 (7-14); *aińūṟṟu* (*nāḻi*), 500 (3-3); *ńālāyiṟattumuppat*, 4030 (5-26); *ńūṟāyiratt-* (*āṇṭum*), 100,000 (1-1).

11th: *oṉṟu*, 1 (8-5); *iraṇṭu*, 2 (2-2); *mūṉṟu* (7-2) 3; *ńāl-* (6-7) 4; *añ-* (*ñāḻi*) 5, (8-3); *aṟu* (*kaḻaiñcu*), 6 (2-5); *eṭṭu*, 8 (6-3); *pattu*, 10 (8-2); *pańtiru*, 12 (8-4); *iṟupattaiń* (*kaḻaiññu*), 25 (7-3); *irupattuńāṟ* (*k-kaḻaiñcu*), 24 (1-4); *muppattaiń*, 35 (10-1); *aypatiṉ* (*kaḻaiñcu*), 50 (7-3); *eḻupatti-raṇṭu*, 72 (5-11); *eṉpatiṉ* (*kaḻam*) (3-2); *ńūṟṟu* (*k-kaḻaññu*) 100 (7-3); *iruńūṟu*, 200 (8-3); *eṉṉūṟṟu eḻupatteṭṭu* (6-28); *āyiram*, 1,000 (8-1); *ńūṟāyiratt-* (*āṇṭum*), 100,000 (5-2).

12th: *oṉṟu* 1 (8-38), *iraṇṭu* 2 (1-54); *mūṉṟu* 3 (3-1); *ńālu* 4 (1-10); *añ* (*ñāḻi*) (2-103); *aym* (*paṟa*), 5 (5-20); *aṟu* (*paṟai*), 6 (5-14); *eḻu* (*ńāḻi*), 7 (4-25); *eṭṭu*, 8 (4-2); *oṉpatu*, 9 (2-9); *patiṉ* (*paṟa*), 10 (5-10; *patiṉoru*, 11 (575); *pańtiru* (*paṟa*), 12 (5-23); *pańtiraṇṭu*, 12 (5-62); *patiṉaiñcu*, 15 (8-21); *patiṉaṟu* (*paṟai*), 16 (5-8); *patiṉeṭṭu*, 18 (6-7); *iṟupatu*, 20 (5-7); *irupattu-oru* (*paṟa*), 21 (5-99); *irupattiru* (*paṟai*), 22 (5-112); *iṟupattuńāḻ* (*-k-kalam*), 24 (6-5); *irupattu-añcu*, 25 (5-60); *irupattaṟu* (*paṟa*), 26 (5-174); *irupatteḻu* (*paṟa*), 27 (5-66); *muppatu*, 30 (5-25); *muppattoru* (*paṟa*), 31 (5-72); *muppattiru* (*ńāḻi*), 32 (5-58); *muppattu-mu* (*-p-paṟa*) (5-79); *muppattaim* (*paṟai*), 35 (5-198); *muppattaṟu* (*kaḻam*), 36 (2-72); *muppatteḻu* (*paṟa*), 37 (5-115); *ńālppatiṉ* (*kalam*), 40 (1-17); *ńālppattaim* (*paṟai*), 45 (5-206); *ńāṟppattaṟu* (*paṟai*), 46 (5-110); *ńālppatteḻu* (*paṟa*), 47 (5-144); *ńālppattu-oṉpatu*, 49 (5-220); *aympatu*, 50 (5-150); *aympattiru* (*paṟa*), 52 (5-13); *aympattaṟu* (*paṟai*), 56 (5-140); *aṟupatu*, 60 (5-45); *aṟupattoru*, 61 (5-31); *aṟupattumu* (*-p-paṟa*), 63 (5-24); *aṟupattaim* (*paṟai*), 65 (5-199); *aṟupattaṟu* (*paṟai*), 66 (5-114); *aṟupatteḻu* (*paṟai*), 67 (5-184); *eḻupatu*, 70 (5-117); *eḻupattaim* (*paṟai*) (5-204); *eṉpatu*, 80 (5-93); *toṇṇūṟṟu-oṟu* (*paṟai*), 91 (5-92); *ńūṟu*, 100 (5-6); *ńūṟṟu-oru* (*paṟai*), 101 (5-93); *ńūṟṟirupatu*, 120 (5-257); *ńūṟṟuirupattu-iru* (*paṟa*), 122 (5-12); *ńūṟṟumuppatu*, 130 (5-179); *ńūṟṟuńālppatu*, 140, (5-15); *nūṟṟaimpatu*, 150 (5-181); *ńūṟṟaimpattu-mu* (*-p-paṟa*), 153 (5-182); *ńūṟṟorupatteḻu* (*paṟa*), 117 (5-149); *iruńūṟu*, 200 (5-44); *iruńūṟṟu-ńālppatu*, 240 (5-256); *ńāńūṟṟu* (*ńāḻi*), 400 (2-105); *toḷḷāyira* (*nāḻi*), 900 (2-89).

13th: *oṟu* (*brāhmaṇaṟ*), 1 (1-5); *iraṇṭu*, 2 (2-1); *aṟu* (*tińkaḷ*), 6 (5-8); *eḻu* (*ńāḻi*), 7 (5-4); *eṭṭu* (*ceṉṟa*), 8 (4-3); *patiṉēḻu* (*ceṉṟa*), 17 (4-2); *pati-ṉeṭṭu*, 18 (3-1); *pattoṉpatu*, 19 (4-4). In figures: 217 (5-2), 384 (1-1) 385 (1-13), 530 (4-4).

Ordinal Numerals:

Ordinals are formed by adding *ām* to the cardinals. These are always prefixed to the substantives which they qualify.

10th: *ńālām* (*-āṉṯu*), 4th (6-5); *aiyyām* (*-āṉṯu*), 5th (10-1); *patiṉorām*, 11th (12-1); *irupattumūṉṟām*, 23rd (6-4); *ńūṟṟuńārppattoṉpatām*, 149th (13-1); *ńālāyirattampattorām*, 4051st (8-1); *ńālāyirattampattirām*, 4052nd (4052nd) (2-1).

In (*aiyyāmāṉṯaikk-*) *etirām* (*-āṉṯu*) the nominal base *etir* is used with the force of an ordinal numeral adjective by adding the suffix *ām*. (10-1).

11th: *iraṉṭām*, 2nd (2-1); *āṟām*, 6th (6-2); *irupattuńālām*, 24th (1-1); *muppattorām*, 31st (3-2); *muppattaiyām*, 35th (62); *muppattāṟām*, 36th (5-4), *etirām* (*-āṉṯu*) (7-1; see under 10th).

12th: *iraṉṭām*, 2nd (1-1), *eṭṭām*, 8th (1-3), *patiṉorām*, 11th (2-13); *iru-ńūṟṟeḻupatteṭṭām*, 278th; *muńńūṟṟiṉālppatteṭṭām*, 348th (6-1).

13th: 389-*tām* (3-1), 392-*ṭām* (4-2), 398-*ām* (4-3), 394-*lām* (4-1), 396-*ṟām* (4-3), 399-*tām* (5-1).

Compound Numbers:

Compound numbers are formed by multiplication and addition:—

(*i*) *Multiplication:*

Examples (10th): *irupatu* (2 × 10) : 20; *muppatu* (3 × 10) : 30; *ńāṟpatu* (4 × 10) : 40; *aimpatu* (5 × 10) : 50; *āṟupatu* (6 × 10) : 60; *eḻupatu* (7 × 10) : 70; *eṇpatu* (8 × 10) : 80; *iruńūṟu* (2 × 100) : 200, *muńńūṟu* (3 × 100) : 300; *aińūṟu* (5 × 100) : 500; *nālāyiram* (4 × 1000) : 4000; *ńūṟāyiram* (100 × 1000) : 100,000.

(*ii*) *Addition:*

Numbers 1 to 9 are added to multiples of ten. Examples (10th): *patiṉoru* (10 + 1) : 11; *pańtiru* (10 + 2) : 12; *patiṉmu-* (10 + 3) : 13; *patiṉaiñcu* (10 + 5) : 15; *patiṉāṟ*(*u*) (10 + 6) : 16; *patiṉeḻu* (10 + 7) : 17; *irupattoru* (20 + 1) : 21; *irupattoṉpatu* (20 + 9) : 29; *ńūṟṟuńāṟ* (100 + 4) : 104; *ńūṟṟirupattumūṉṟu* (100 + 23) : 123; *ńūṟṟeṇpatu* (100 + 80) : 180; *muńńūṟṟaṟupatu* (300 + 60) 360; *ńālāyirattumuppatu* (4000 + 30) : 4030.

Numerals as Adjectives:

By their very nature, numerals have to be considered as adjectives of the definite totalizer type (see p. 94) irrespective of whether they precede

or follow the substantives they refer to.[3] Both the short and the full forms of the numerals can precede the substantives except in the case of *o<u>n</u><u>r</u>u* (for which only the short form *oru* or *ōr* can precede); but only the full forms can be used when the numerals follow the substantives they refer to.

(i) Examples of numerals occurring before the substantives :—

10th: (a) *ōr oṭiyi<u>r</u>* (7-8), *oru kuṭi* (1-12), *iru ńāḻi* (8-1), etc.
(b) *iraṇṭu viḷakku* (4-39), *mū<u>n</u><u>r</u>u kāṇam* (5-4), etc.

11th: (a) *iru ńāḻi* (7-2), *a<u>r</u>u kaḷañcu* (2-5), etc.
(b) *iraṇṭu pa<u>r</u>ai* (2-2), *mū<u>n</u><u>r</u>u ńāḷ* (7-2), etc.

12th: (a) *iru ńāḻi* (2-118), *muń-ńāḻi* (4-24), *mu-p-pa<u>r</u>a* (5-8), etc.
(b) *iraṇṭ-ūr* (1-54), *mū<u>n</u><u>r</u>u calākai* (3-1), etc.

13th: (a) *iru ńāḻi* (2-2), *ā<u>r</u>u tiṅkaḷ* (5-8), etc.
(b) *iraṇṭ-eṭattum* (2-1), *patto<u>n</u>patu ńāḷ* (4-4), etc.

(ii) Examples of numerals occurring after the substantives :—

12th: *paṇam ńāli<u>n</u><u>n</u>um* (8-21), *aḻakaccu pati<u>n</u>aiñci<u>n</u><u>n</u>um* (8-21), etc.

13th: *accu 8-<u>n</u><u>n</u>um* (5-6), etc.

Appellative Nouns of Number :

Personal or Appellative nouns of number are formed by adding personal endings to the special adjectival forms of the cardinal numerals.

Examples: —

10th (*Īḻakkaiyar-*) *eṇmar-um* (1-44), (*ivakaḷ*) *paṅńiruvar-um* (1-7), (*ivva<u>n</u>-*) *aivar-kkum* (1-8), (*ivva<u>n</u>-*) *aivarum* (2-2), *iruvar-uṅ* (4-48).

11th: *oruttar* (8-3), *āyiravar* (*pirāmaṇarai* (8-52), *muńńū<u>r</u><u>r</u>uvar* (7-3), *ńālvar* (7-2), *aivar* (7-2), *āyiravar* (8-2).

12th: *iruvar* (5-259), *ńālvar* (5-280), *a<u>r</u>uńū<u>r</u><u>r</u>uvar* (6-2).

Distributive Numerals:

Distributive numerals of *o<u>n</u><u>r</u>u*, *iraṇṭu* and *ńū<u>r</u>u* are to be found in the inscriptions. These are formed by duplicating the number. In the case of *o<u>n</u><u>r</u>u* the short form *ōr* is used and it becomes *ōrō* (< *ōrōru*).

3. It may be mentioned here that the usual practice is to consider numerals as having the function of adjectives only when they precede the substantives; when they follow the substantives they are considered as neuter nouns. It is true when they follow the substantives they refer to they have the force of neuter nouns and take the case terminations which would normally be suffixed to the substantives; but all the same their adjectival function does not disappear, since they are still qualifying the substantives.

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11th: *ōrō* (*kulai*) (8-2), *iraṭṭiraṭṭai* (*kulai*) (8-2), *ńūṟu-ńūṟu* (*māṉiṭattai*) (8-2), *ōrōttoruttar* (8-3), *ōrōrttar* (8-2).
12th: *ōrō* (*tiruńańtāviḷakku*) (6-4), *ōrō paṇi* (5-282), *ńūṟu-ńūṟu ceytu* (5-282).
13th: *ōrō* (*tirumāla*) (1-10), *ōrō* (*tińkaḷ*) (5-4).

Times of Number:

11th: (*muṭṭ-*) *iraṭṭi* 'twice the default' (6-20), *iraṭṭiraṇṭu* 'twice two (?)' (8-3).
12th: *oru tuṭai* 'once' (6-6), *oṉṟu* (*muṭṭukil*), *iraṇṭu* (*muṭṭukil*), *mūṉṟu* (*muṭṭukil*) 'if default occurs once, twice, thrice' (8-31/32), *iraṭṭi* 'double' (8-1).

Fractions:

10th: *aṟupatiloṉṟu*, 1/60 (2-28), *ńāloṉṟu*, 1/4 (7-8), *arai*, 1/2 (11-6).
11th: *arai* (8-51).
12th: *arai* (5-17), *añcoṉṟu*, 1/5 (5-13), *ńāloṉṟu*, 1/4 (5-25), *añciraṇṭu* 2/5 (5-125), *eṭṭoṉṟu* 1/8 (5-163).

Fractions occur before the substantives they qualify, like the other numerals: e.g. *arai-k-kāṇań-karuppuram* (11-6). They are added to the numerals without any change; e.g. *iraṇṭarai* (10th: 5-15), *oṉṟarai* (10: 7-10), *ēḻarai* (10: 5-15). Sometimes the fraction is expressed separately and not added to the whole number. In such cases the whole number precedes the substantive and the fraction follows it. E.g. *patiṉmuttūṇi-y-arai-p-pāṭu* (10: 4-25).

CHAPTER VI

VERBS

1. *Bases.*

The verbal bases found in the inscriptions may be broadly classified as (i) simple bases, and (ii) compound bases. These two could be further divided into two main groups each:—

(i) *Simple bases:*

(a) Native: Examples:—*amai, aṟi, aḷa, ārāy, āḷ, iṭu, iru, ūṭṭu, eḻutu, oḻi, kāṇ, cey, taṭu, tīr, ńaṭu, paṭu, piḷai, peṟu, mēy, varu, vai*, etc.

(b) Bases borrowed from IA (Skt.) verbal roots and verbal derivatives: Examples:—*ārātikk-, ilakkikk-, (rakṣikk-), ńivētikk-, virōtikk-, viyāparikk-, pirsātikk-, atikarikk-, jīrṇikk-, kalppikk-*, etc.

(ii) *Compound bases:*

(a) Noun (or verbal noun) and verb: Examples:—*aṭippaṭu, atikārañcey, taṇṭappaṭu, vilaiyiṭu, paṇicey, kuṭi-iru, kuṟińōkku, kaikkoḷ, kāraṇmai-cey, aruḷiccey, celaviṭu*, etc.

(b) Past participle and verb: Examples:—*aṭṭikkuṭu, koṇṭuvaru, cuḷaṉṟukūṭu, taṭuttuvilakku, paṟaiññutīr*, etc.

Of these bases[1] some are not current in New Malayāḷam. Such bases have been marked with a prefixed asterisk in the list of verbal roots given at the end of this chapter. A few others have suffered semantic changes or narrowing. For example *arutu* is used in the inscriptions with the sense of impossibility and not with that of prohibition as is usual in new Malayāḷam. These have been marked with a suffixed asterisk.

Formation of transitival and causatival bases:

A transitival (or causative-transitival) verb-base is formed from an intransitive one by affixing *-kk-* or *-tt-*, as in Tamil (cf. *MOTV*, pp. 751-52; see also *EMM*, p. 51).

Examples:—*muṭṭikk-* (10: 6-87; < *muṭṭ-*), *amaikk-* (11-6-5; < *amai*), *ńaṉaikk-* (12: 1-3; < *ńaṉai*), *kiṭatt-* (12: 5-279; < *kiṭa*), *celutt-* (12: 4-32; < *cel*), *cārtt-* (13: 1-104; *cār-*).

1. Most of these bases, as L. V. R. AIYAR observes, (*EMM*, p. 38), are directly allied to Early Middle Tamil.

The 'gemination' or 'doubling' of the finals of certain causative-transitival bases like *kūṭṭ-* may be ascribed to the sandhi action of *-tt-* on the ending of the intransitive base. (Cf. *MOTV*, p. 752).

Causatives proper are formed by means of the affixes *-vi-kk-* and *-ppi-kk-* which appear as *-vi-tt-* and *-ppi-tt-* in past stems. The *-tt-* of *-vi-tt-* and *-ppi-tt-* often appears as *-cc-* on account of phonological change (see p. 18), and sometimes the *-vi-* (and *-ppi-*[2]) are dropped. Thus *ceyvikk-* (inf., 12: 6-4) > *ceyvitta* (past, 10: 2-5), *ceyvicca* (past, 10: 2-5), *ceyyiccu* (11: 8-2) (*ceyyikk-*,[3] 11: 8-3).

The following are the causatival forms appearing in the inscriptions:—

10th: *aṭṭuvittukkuṭuttāṉ* (1-25), *ceyvitta* (1-6), *ceyvicca* (2-5), *celitticcu* (8-1), *celuttikka* (9-2), *koṭuppikka* (9-2), *ceyvikka* (10-6), *kēḷppiccu* (12-6).

11th: *kāṭṭiccōr* (3-5), *vaippiccu* (6-21), *aṭṭippitu* (7-2), *eḻuticcitu* (7-3), *viṭṭiccukkoḷvitu* (7-3), *ceyvippitāka* (8-2), *amirtucaiyyiccu* (8-2), *kārāṇmaiceyyiccu* (8-5).

12th: *veṭṭiccukoḷka* (4-21), *vāḻiccukoḷvitu* (5-20), *kaḻikiccu* (5-275), *koḷutticcu* (5-276), *aṭṭiccu* (5-276), *pūṭṭiccu* (5-277), *koṭuppiccu* (5-278), *pōkkiccu* (5-278), *cēviccu* (5-281), *ceyviccu* (6-4), *vaippiccu* (7-20).

13th: *ceyviccaruḷa* (4-8), *āṭiccaruḷiya* (4-16), *cārtticcu* (5-7).

2. *Personal terminations.*

Verbal finites with and without personal endings are met with in the inscriptions. The personal endings are: *ēṉ* and *āṉ* for the first person sin-

2. "*-ppi-* appearing in the causative verbs with the extension suffix *-kk-* owes its long voiceless plosive *-pp-* to the sandhi change $kk + v = pp$, ..." (*MOTV*, p. 755).

3. "A very important point in connection with Mal. causatives like *Ceyyikk-* and *viṭuvikk-*, is their immediate relationship with Tam. causative bases with *-vi-* and *-ppi-* Now, these causative endings are conspicuous by their absence in Old Tamil. None of the Śaṅgam works show such bases, except *Paripāḍal* which, as I have shown in my *MOTV*, evidences some linguistic peculiarities of the Middle Tamil period. It is in the works of the Āḻwārs and the Śaivites that causative bases with *-vi-*, *-bi-* and *-ppi-* crop up abundantly in Tamil literature. The primary causative affix *-vi-* (*-bi-* and *-ppi-* are sandhi-modified variants) was perhaps isolated as such from original formations of the type of *pāṭu-v-i*, in which the causative force was conferred by *ī* (shortened afterwards), the *-v-* immediately before it arising as a glide after the back vowel *u*. The existence in Old Tamil of causatives with *ī*, *i* directly annexed to the base as in *koḷī* (with its conjunctive participle appearing as *koḷ-u-v-*) strengthens this suggestion regarding the origin of the Middle Tamil causative affix *vi-*.

It is remarkable that the Mal. causatives are directly related to these Middle Tamil affixes.,' (*EMM*, p. 52).

gular, *ōm* for the first person plural, *āṉ* and *āḷ* for the third person singular, masculine and feminine respectively, and *ār* for the third person (masc.) plural. It may be noted that these endings agree with those of Middle Tamil (cf. *HGT*, pp. 155-56).

Instances of verbs without any personal terminations are met with even in the earliest inscription selected for this study, viz. the Kōṭṭayam plates of Sthāṇu Ravi, belonging to the close of the ninth century. The frequency of occurrence of this phenomenon gradually increases with the passing of time. From this we may conclude that the habit of discarding personal terminations had become popular in the colloquials quite early in the history of Malayāḷam. Literary tradition, however, continued to preserve them until a very late date, though even in such early texts as *Kauṭalīyam* and *Rāmacaritam* personal endings are occasionally dispensed with.

Professor L. V. Ramaswami AIYAR's remarks in this connection deserve to be quoted: "Though personal endings for tense forms were common in the Old Malayāḷam texts, there do exist instances in these texts of finites without personal terminations. This absence of terminations gradually affects more and more categories of finites with the passing of time. There is a gradualness in the dropping of personal endings from period to period. As will be seen below, all the types for which personal endings are envisaged by *Līlātilakam* do not have these endings in *Kṛṣṇagātha*, and not all the types of *Kṛṣṇagātha* showing personal endings are represented in *Eḻuttaccaṉ*. This gradualness may have been purely literary; but it is quite possible that it may have mirrored, though chronologically at belated stages, a gradually increasing tendency in the regional and communal colloquials to drop these personal endings." [*EMM*, p. 53.]

A few third person masculine tense finites, both singular and plural, with *-itu* as an expletive are found in the 11th century inscriptions; e.g., *uvaccakaḷ eḻutitu, koṭuttitu Kuñcikuṭṭavarmaṉ*. This, perhaps, reflects an intermediary stage in the development of the characteristic Malayāḷam verb-finites without personal terminations. It is possible that *itu* here is out of the participial form with *-atu*. The *-itu*-forms appear in Old Malayāḷam texts as *Kauṭalīyam* and *Rāmacaritam*.

The evidence furnished by the fourteenth century grammar *Līlātilakam* on the question of personal endings for tense-forms has considerable value.

(i) *Śilpa* 2, 23, states that the endings of gender and number appear as a rule for verb-forms also. The commentary indicates that sometimes personal endings did not appear for Malayāḷam finites. (Cf. *GL*, p. 53.)

(*sūtra: kriyāyām kālatraye prāyō gaditam.* comm.: *uṇṭāṉ, uṇṇiṉṟāṉ ityādi. prāyōgrahaṇād uṇṇum, varum ityādi vaññu, vaṉṟu ityādi ca setsyati.*

(ii) *Śilpa*, 2, 24, comm. expressly adverts to the absence of personal endings in the 'neuter' tense-forms more than in the others. (*napumsake vaññū, pōyi. etadekasmin bahāvapi syāt*).

(iii) In the citations furnished by the commentaries, there are instances of the absence of personal endings for tense-forms:—*atē kaṇṭu* (3, 8), *ceññī kaṭākṣam* (4, 2), *atu veḷiyāy* (4, 16), *ñāṉumoṉṟ-allalāyī* (ib.).

(iv) The personal endings allowed expressly or impliedly by this grammar are of many types, not being restricted to a few as in *Eḻuttaccaṉ*........

(v) A very significant observation is made by *Līlātilakam* in the commentary on the third sūtra of the second *śilpa:—nanu 'vaṅtāṉ' 'iruṅtāṉ' ityādikam bhāṣante keraḷa hīnajātīyāḥ* '(it may be said that) low castes in Malabar do say '*vaṅtāṉ*' '*iruṅtāṉ*'.

Though the context in which this incidental observation is made refers to the consonant group *ṅt* (and its Mal. development *ññ*), the fact that the author (or the commentator) attributes forms like these with personal endings to the 'low castes' of Malabar is, I think, significant in indicating that the personal endings had not during this period completely disappeared in all communal colloquials. Apparently, the development of characteristic Mal. features had not been uniform in all communal (and regional) colloquials." (*EMM*, pp. 54-55).

Ramaswami Aiyar sums up the facts about the Old Mal. verb-forms as follows:

"(a) There is a distinct difference between Old Mal. on the one hand and Eḻuttaccan on the other in the number and variety of the types of personal endings employed. The *campus*, *Kṛṣṇagātha* and *Ceṟuśśēri Bhāratam* already mark the transition, in as much as they do not show all the types contemplated by *Līlātilakam*;

and (b) even in Old Mal., the following peculiarities point to the fact that personal endings for tense-forms may have largely disappeared from the colloquial, at least in certain areas:

(i) the extensive use of forms without personal endings in *Kṛṣṇgātha*, *Ceṟuśśēri Bhāratam* and the *campus*;

(ii) the occurrence even in *Uṇṇuṅīlisandēśam*, *Rāmacaritam*, *Kaṇṇaśśa Rāmāyaṇam*, *Kaṇṇaśśa Bhāratam* and *Kaṇṇaśśa Bhāgavatam* of instances without personal endings;

(iii) the use of *itu* or *utu* as an expletive (in the stead of personal endings) for tense-forms of all persons, indicating that even in the literature of the time personal endings were on the 'road to ruin';

(iv) the conspicuous absence in literature of personal endings for the third person present forms;

(v) the gradual encroachment in Mal. by the *-um* future on 'persons' other than the third person;

(vi) the explicit statement made by *Līlātilakam* that in Mal. literature, personal endings may or may not appear,—a fact which points possibly to the frequency of the absence of these endings in the colloquials." (*EMM*, pp. 59-60).

It has been maintained by some scholars[4] that personal endings for tense forms never existed in Malayāḷam colloquials and that the absence of personal endings was a feature which Malayāḷam inherited from primitive Dravidian. These scholars account for the appearance of personal endings in early texts and documents by the influence of Tamil. But as Prof. L. V. R. AIYAR has shown 'there is no proof available for the position that the absence of the personal endings was a feature inherited by Mal. from the primitive Dravidian parent language, and that this lack of personal terminations therefore stands for a stage anterior to that of other Dravidian speeches."[5]

The following are the salient features of the evidence of the inscriptions against such a postulate:—

(i) In the large majority of instances personal endings do appear for verb-finites in all the four centuries under consideration.

(ii) The tense forms without terminations are fewer in the earlier inscriptions than in the later, which shows that there is a gradualness in the evolution of the phenomenon.

(iii) The absence of personal terminations is not associated with the first person in the inscriptions, which fact points to the deep-rooted character of these terminations. Also the occurrence of third person verb-finites with the expletive *-itu* where there is no personal ending may be taken as the result of the tendency to use participial forms with *-atu* in order to supply a 'felt want' on the disintegration of the personal terminations.

4. Cf. CALDWELL, *Comparative Grammar*, p. 337; A. R. Rajaraja VARMA, *Kēraḷapāṇinīyam*, p. 254.
5. Cf. Jules BLOCH, op. cit., p. 45.

Thus the evidence of the inscriptions proves that personal endings could not have been exotic in Malayāḷam and fully justify the view that Malayāḷam in its earlier stages had personal endings of the Middle Tamil type, the discarding of which was one of the important features of the evolution of Malayāḷam morphology.

3. *Tenses.* The verb-forms in the inscriptions show four tenses: the past, the present, the future and the aoristic. No clear-cut line can be drawn between the present and the future, and there are several instances of overlapping in tense values.

(i) *The Past Tense:*

The past stem is formed (1) with the morpheme *-t-* (which appears as *tu* with the enunciate *u* in certain types of bases[6] and (2) with *i* in others. The addition of *-t-* sometimes involves sandhi changes which produce the past stems with *-ṅt-*, *-ṉṟ-*, *-ṇṭ-*, *-ṟṟ-* or with the 'gemination' of the final *k, ṭ,* and *ṟ* (Cf. *DS, QJMS,* 27, p. 247, *PMP,* IV-E; and *Kēraḷapāṇinīyam,* pp. 223-27). Early Old Malayāḷam in this respect is in the main guided by the same rules as in Tamil[7] but it also shows some peculiarities such as the form *vāṇṇ-* (12:3-1) which appears beside *vāḻṅt-* (12:5-1).[8]

The phonological changes of *ṅt* and *ṉṟ* > *ṅṅ, ṅt* > *ñc* > *ññ,* and *tt*>*cc* are represented in the past stems (see under Phonology).

The past stem functions as an adverbial participle, while the finite verb is usually formed by adding personal terminations or the expletive *-itu.* Rarely also the past stem without such suffixes is used as the past finite.

(ii) *The Present Tense:*

The present tense endings are *-ā-ṅiṉṟ-,*[9] *-k-iṉṟ-, -iṉṟ-,* and *-uṅṅ-*. *-ā-ṅiṉṟ-* and *-k-iṉṟ-* are typical Middle Tamil endings mentioned by *Naṉṉūl,* 143.[10] The characteristic Malayāḷam present tense ending *-uṅṅ-* appears to have developed in the colloquials by the 11th century, as there is one

6. In all bases of this type the presence of the morpheme *-t-* is not evident (e.g. *pukk-* < *puk-*), but in our present state of knowledge it would be convenient to postulate (as Rajaraja VARMA and L. V. R. AIYAR appear to do) the action of the element *-t-* in all bases which do not have past stem with *-i-*.

7. Cf. *DS, QJMS* 27. 256; *EMM,* p. 63; and *MOTV,* p. 759.

8. See *EMM,* p. 63; see also *DS, QJMS,* 27 p. 256.

9. It is interesting to note here that *Līl.* (I 1, comm.) expressly refers to *-ā-ṅiṉṟ-* as a Tamil ending, the corresponding Mal. ending being *-iṉṟ-* (c. *GL,* p. 20).

10. Cf. *HGT,* pp. 168-70.

instance of it (viz., *ṅāṭuvāḷuṅṅa ṅāyar*) in an 11th century inscription. Evidently, it had developed out of *-iṉṟ-* by the normal Mal. change of *-iṉṟ* to *ṅṅ* (see p. 26). (Cf. *EMM*, pp. 62-63).

(iii) The Future Tense :

Two types of future tense are met with: (1) *-v* type with personal endings,[11] and (2) the *-um* type. Both the *-v-* and the *-um* types are often used with an aoristic or indeterminate signification. It is interesting to note that the *-um* type is not used with reference to the first person as in New Malayāḷam. And unlike in Middle Tamil (Cf. *EMM*, p. 66), *-um* is used in connection with third person singular and plural 'rationals'. "The use of *-um* in the earliest Mal. texts corresponds, generally speaking, to that of Middle Tamil, except for the fact that the *-um* type as a future had become very common in third person singular and plural 'rationals' in Mal. while in Middle Tam. it was used in connection only with singulars among the 'rationals', and here too only as an 'indeterminate' tense." (*EMM*, p. 69).

(iv) The Aoristic Tense :

An aoristic tense[12] of the *-ō* (< *-ū*) type is met with. This tense-type has an indeterminate sense (with sometimes a bias for the future).

4. *Moods.* The verb-forms in the inscriptions can be said to have the following moods: indicative, imperative (and permissive), optative conditional (and concessive), infinitive and negative. As CALDWELL has pointed out (*CGD*, pp. 414-15), in Malayāḷam, as in the other Dravidian languages, "the verb has, properly speaking, only one mood, the indicative; and the forms which correspond to the conditional, the imperative and the infinitive moods of other languages, are verbal nouns or compounds, rather than moods."

The following are the syntactic positions of the verbal moods :—

1. The Indicative: (i) Normally placed at the end of the sentence :
itu piracitti-paṇṇi.

(ii) Rarely, for the sake of emphasis, the subject is placed after the indicative verb: *ivakaḷ vēṇṭa-k-kēṭṭu-k-kēḷppiccu kaiyyeḻuti aṟivēn Kummaṅkoṭṭu Iravi-kunṟapōḻanen.*

11. *Līl*, I, 1, comm.
12. For a masterly discussion of this unique Mal. tense-type, which is usually regarded as a future tense, see *EMM*, pp. 70-75.

2. Imperative: Placed at the end of the sentence: *mūḻakku neykoṇṭu tiruviḷakku vaikka.*
3. Negative: Placed at the end of the sentence: *avakaḷ santatiyum nūṟṟuk-kaḷañcu poṉṟaṇṭaṅ- koṭuttaṉṟi kūṭa-k-kaṭavar allar.*
4. Conditional and Concessive: Placed at the end of the conditional or concessive clause, which precedes the main clause:
   (i) Conditional: *i-c-celavu muṭṭukil, muṭṭiraṭṭi celutta-k-kaṭaviyaṉ pāṭṭamāḷan.*
   (ii) Concessive: *maṟṟum ṅakarattil kuṭikaḷ kōyilkku iṟukkumatu iṟāmmaiyum, peṟumatu peṟavum āka-c-ceppeṭṭēṭum ceytu koṭuttōm.*

I. *The Indicative Mood:*

(i) *Past tense:*

(a) *With personal terminations:*

		sg.	pl.	
First person				
10th:	trans.	*aṭṭikkuṭuttēṉ* (1-12^{2}) *koṭuttēṉ* (2-53^{2}).		
11th:			*koṭuttōm* (5-12), *viṭṭōm* (5-13).	hon. pl.
12th:			*oḻiññōm* (1-63).	
Second person: No examples.				
Third person:				
Masc.				
10th:	trans.	*amaiccāṉ* (8-2), *amaccāṉ* 8-1), *koṭuttāṉ* (9-1), *aṭṭikkuṭuttāṉ* (12-1^{3}), *ṅiroṭṭikkoṭuttāṉ* (1-25).	*vaccukkoṭuttār* (2-39), *amaiccār* (9-2), *porakkuṭuttār* (11-13),	
	caus.	*aṭṭuvittukkuṭuttāṉ* (1-25)		
11th:	trans.	*amaiccāṉ* (6-5^{2}), *aṭṭikkuṭuttāṉ* (6-5^{3}).	*aṭṭikkuṭuttaruḷiyār* (6-6) (hon. pl.)	
			intr. *amaiññār* (3-3),	
12th:	trans.		*tirukkaiṅaṉaiccaruḷiyār* (1-23) *tiruvuḷḷampaṇṇi-y-aruḷiyār* (1-27). *kal eḻuti ṅāṭṭi-k-koṭuttār* (1-67), *ṅiroṭumaṭṭikkoṭuttār* (6-2).	

13th: trans. — *koṭuttār* (5-5).

Fem.

10: trans *ńiroṭṭikkoṭuttāḷ* (13-11)

(b) *Without personal terminations:*

Third person:

Masc.

10th: trans. — *camaiccu* (?) (2-4), (*Aiyaṉaṭikaḷ tiruvaṭiyum Iḷaṅkūṟuvāḷiṉṟa Rāmatiruvaṭiyum atikārarum prakṛtiyum uḷppaṭa*) *vaccu* (*i-p-pūmikkellai*) (2-10).

11th: trans. (*Kecavaṉ palikkal paṟṟiccu ńāḻi ari*) *amaccu* (4-2).

12th: *koṭuttu* (?) (2-129). — (...*Irāmaṉ-tāyaṉum* ...*Nārāyaṇa-nārāyaṇaṉum ūrppotuvāḷuṅkūṭi*) *tirumukam patiyuṟutti* (1-53).

itu piracatti paṇṇi (5-284).

intrans. — *avirotam paṇṇi vattu* (5-252).

kaṟpiccu (5-269[2]).

(c) *Past tense with the ending -itu as an expletive:*[13]

Third person:

Masc.

11th: trans. *koṭuttitu* (6-19) — (*uvaccakaḷ*) *eḻutitu* (1-6), (*Mūttakūṟṟil eḻuńūṟṟuvarum paṇiyuṭaiya ńāyaṉum*, etc.) *aṭṭikkoṭuttitu* (6-11).

caus. — (*i-p-paric-i-ń-ńāṭuvāḷuńńāyarum muńńūṟṟuvarum paṇiyuṭaiyavakaḷum uḷḷiruńtu-i-k-kaccam*) *eḻuticcitu* (7-3).

(ii) *Present-Future tense*[14] (with aoristic significations):

(a) *-v* type with personal terminations:

First person:

10th: trans. (*ńāṉum*) *aṟivaṉ* (13-21)[4]

kaiyyeḻuti aṟivēṉ (12-6).

13. Cf. *EMM*, pp. 33, 57, 58 and 59.

14. See pp. 108-109.

11th: *a<u>r</u>ivē<u>n</u>* (5-20[8]).
Third person:
10th: *a<u>r</u>ivar* (12-6).
11th: *a<u>r</u>ivar* (6-24).

(b) *-um type:*
Third person:
Masc.
12th: trans. (*Kaṇṭa<u>n</u>-kaṇṭa<u>n</u>um*) *a<u>r</u>iyum* (6-8), (*Koviṅtan-kumara<u>n</u>um*) *a<u>r</u>iyum* (7-28).

Neut.
10th: intr. (*Cuṅtara<u>n</u>ukkum*) *okkum* (1-27), (*Mū<u>l</u>ikkaḷattu kaccat-toṭ-okkum* (8-2).
12th: (*. . .puraiyiṭamum*) *kū-ṭum* (5-233).

(iii) *Future tense:*
-um type:
Third person:
Masc.
10th: intr. (*vaṇṇā<u>n</u>um. . . .ta<u>n</u> paṇi*) *cey-tukoḷḷa-p-pe<u>r</u>um* (1-17).
12th: *ka<u>r</u>piccumaikkum* (?) (5-274).

(iv) *Aoristic tense* (with a purely indeterminate sense):
12th: (*i-ń-ńel Mēṭamum Iṭapamum celavi<u>nn</u>u*) *oḷḷō* (5-16). This aoristic type may be, as AIYAR suggests (*EMM*, p. 75), from the neuter participial noun *uḷḷatu* through *uḷḷūtu*, where *ū* has been introduced on the analogy of forms like *celvūtu, koṭuppūtu*, etc. occurring numerously in Old Mal. texts.

II. *The Imperative Mood:*
No imperative proper is represented in the inscriptions, but the following forms (most of which are compounds) have the value of an 'imperative' (or, better, 'injunctive'[15]) or a 'permissive'.

15. Cf. GRAY, *Foundations of Language*, p. 210.

(i) Polite imperatives derived from optatives:

(a) With the *kārita* reinforcer *-kk*:

10th: (*uḷakku ńeyum*) *ńivetikka* (3-6), *tiruviḷakku vaikka* (3-7).

(b) With *-u-ka embodied:*

10th: *ańtiyil muṉṉ-uṭuka* (3-6).

12th: *kuṭińokkuka* (5-252).

(ii) Optatives ending in *-āka* are sometimes used with the force of a polite imperative:

10th: *eṭṭukācu koḷḷa-k-kaṭavārākavum* (2-30).

11th: *viṭuvitāka* (7-3).

12th: *celuttuvitākavum* (5-261). (See under Optatives).

(iii) Infinitives with the auxiliaries *kaṭavaṉ* (*-var*) and *peṟuvar* convey an 'injunctive' (or 'obligative') sense:

10th: *tīrttukoḷḷa-k-kaṭavar* (2-47), *kuṭukka-k-kaṭavar* (2-52), etc.

11th: *aṭṭa-k-kaṭaviyar* (2-3), *iṭa-k-kaṭaviyan* (8-5), etc.

10th: *ārāyńtukoḷḷa-p-peṟuvar* (1-20), *ceytukoḷḷa-p-peṟuvar* (2-45), etc. (See under Infinitive Participles for more examples).

(iv) Infinitives with the auxiliary *peṟār* function as injunctives of the 'prohibitive' type:

10th: *koḷḷa-p-peṟār* (1-10), *colla-p-peṟār* (2-21), *kavara-p-peṟār* (5-22), *atikārańceyya-p-peṟār* (5-25), etc.

11th: *oṟṟikoḷḷavum uḷavu uḷavum peṟār* (1-3), etc.

12th: *koṭukka-p-peṟār* (5-272), etc. (See under Infinitive Participles).

(v) The neuter participial forms with final *-atu*, *itu* have an imperative value:[16]

10th: *oppatu* (3-4), *taṉṭappaṭuvatu* (5-16), *koṭuppatu* (5-16), *ūrkkum puṟamāvitu* (6-59), *aḷappitu* (7-36), *celvitu* (8-1), *viṭuppitāvitu* (10-4), *taṉṭappaṭuvitu* (13-17), *koṭuppitu*.

11th *taṉṭappaṭuvitu* (1-4), *ittaṉṭamē paṭuvitu* (1-4), *kaṉṭukoḷvitu* (1-5), *aṭṭuvatuńceyatu* (2-5), *pariṭaimār koḷvitu* (2-6), *amirtu ceyvitu* (6-12), *uvāccakaḷ koḷvitu* (6-13), *eṭuppitu* (6-28), *koṭṭuvatu* (7-2), *ńālvar koṭṭuvitu* (7-2), *taṉṭamiṭuvitu* (7-2), *aṭṭuvitu* (7-2), *aṭṭippitu* (caus., 7-2), *vilakkiṉum varuvitu* (7-3), *tīrttu koṭuppitu* (7-3), *viṭṭiccukoḷvitu* (caus., 7-3).

12th: *celvatu* (2-79), *celaviṭuvitu* (2-87), *koṭuppatu* (2-107), *celuttuvitu* (4-32), *kańńāṟiccukoḷvitu* (5-20), *vāḷiccukoḷvitu* (caus., 5-20), *piṭiccaḷańńukoḷvitu* (5-38), *koṭuppitu* (5-41), *koṭuttukoḷvitu* (5-49), *koḷ-*

16. Cf. *EMM*, pp. 74 and 91; *GL*, p. 5.

vitu (5-125), *veṇṭikkoḷvitu* (5-270), *taṇṭappaṭuvitu* (5-273), *celuttivaruvitu* (6-4), *iṭuvatu* (7-21), *ceytuvaruvitu* (8-30), *koṭuttuvaruvitu* (8-38).

13th: *cārttivaruvitu* (1-10), *koḷvitu* (1-11), *tīrttukoṭuppitu* (1-12), *eṭuttukoṇṭuvaruvitu* (5-7), *celuttivaruvitu* (5-4).

(vi) The past verb-form followed by the auxiliary *koḷka* has the sense of a 'permissive':[17]

12th: *veṭṭiccukoḷka* (caus., 4-21).

III. *The Optative Mood:*

The optative is formed with the suffixes *-āka* (itself the optative of *-āk-*[18]) and *-vēṇṭum.*

(i) (a) *-āka* used after the fully conjugated verb in Old Tam. (cf. *MOTV*, p. 772):

10th: *tēvarē-y-tṉukkirāmañceyvārāka* (1-26).

(b) *-āka* used after participial forms have the force of a polite imperative:

10th: *eṭṭukācu koḷḷakkaṭavarākavum* (2-30), *ulku viṭuppatākavum* (2-32), *ceyvatākavum* (2-34), *ilakkiccuvaippatākavum* (2-35), *koḷvatāka* (2-38), *āraññukoḷḷakkaṭavarākavum* (2-47).

11th: (*pūmiyum puraiyiṭamum pattāyamum*) *viṭuvitāka* (7-3).

12th: *celuttuvitākavum* (5-261), *celvatākavum* (5-267), *kaṟpiccu pōvitākavum* (5-281).

(ii) *-vēṇṭum* added to the infinitive:[19]

12th: *piracatti paṇṇittaravēṇṭum* (5-5).

(iii) In (*iraṇṭu talaiyāruṅkūṭicceyvatēy karumam*) *ākavum* (10: 2-50) the optative *āka* is used with the value of a polite imperative. (Cf. *GL*, p. 55).

Negative Optatives:

(i) With the negative finite *illai* prefixed to the optative:

10th: *aḻivulk-illai-y-ākavum* (2-29).

(ii) With *-āka* suffixed to the fully conjugated negative verbal form:

10th: *aḻakaccu koḷḷappēṟār-ākavum* (2-29).

17. New Mal. has *koḷḷuka* beside the old form.

18. See (iii) below. Here *ā-* is the root and *-ka* is the suffix. *-ka* is expressly mentioned as the optative suffix by *Vīracōḻiyam* (cf. *HGT*, p. 181).

19. For the combining of *Vēṇṭum* with the verbal noun in Old Tam. for forming the optative, and the later (and modern) constructions of the infinitive + *vēṇṭum* type, see *MOTV*, p. 772; ARDEN, *Tamil Grammar*, p. 240. Cf. also *Līl*, II, 24, comm.

IV. *The Conditional and Concessive Moods:*

The conditional endings are *-āyiṉ*, *-il* (*-k-il*), *-ākil*, and *āl*. Of these *-āyiṉ* is an Old Tamil form, being the conditional of *āk-* with the suffix *-in*. It was used as a conditional ending in Old Tamil, much as *āka* the optative of *āk-* was used as an optative ending.[20] *-āyin* occurs only in one instance in a 10th century inscription. *-il*, *-ākil*, and *-āl* were all active in Middle Tamil (cf. V, *Dhatu*, 10; see *EMM*, pp. 84-85). It is possible that *-il* arose as a colloqual variant of *-in*. *Nacciṉārkkiṉiyar*, the commentator on *Tolkāppiyam*, has pointed out that *āl* is the contraction of *āyil* (< *āk* + *il*).[21]

The concessive mood is generally formed by annexing the *samuccaya* *-um* to the conditional form, as in Tamil and in other south Dravidian languages (Cf. *MOTV*, p. 773, p. 85).

A. *Conditionals:*

(i) *-il* added to the base:

10th: *muṭṭil* (5-14), *muṭṭikkil* (tr., 6-87), *virōtikkil* (6-92), *piḷaikkil* (6-99).
11th: *itu muṭṭikkil* (2-4), *puḷḷippaṭil* (7-2), *irukkil* (7-3), *virōtikkil* (8-4).
12th: *irukkil* (5-255).

(ii) *-k-il* suffixed to the verb-base:[22]

10th: *muṭṭukil* (4-71).
12th: *muṭṭukil* (5-212).
13th: *muṭṭukil* (1-11), *varukil* (1-12).

(iii) *-ākil* suffixed to finite tense-forms:

10th: *oṉṭāyil* (2-46), *uṇṭākil* (2-47).
12th: *oṉṭākil* (5-270).

Negative conditionals:

(i) With *-āyiṉ* or *-ākil* suffixed to the fully conjugated negative verbal form with personal terminations:

10th: *ūṭṭātoḷivārāyiṉ* (12-7).
11th: *celluttātoḷivārākil* (8-4), *taṅṅucellāṉākil* (8-5).

20. Cf. *MOTV*, pp. 772 and 773.
21. Cf. ib. p. 773.
22. 'On account of the influence of forms like *ākil* and *pōkil* (where *-k-* is a reinforcer appearing in the conditional, the infinitive participle and the future forms), from a very early period *-k-* has been incorporated in the conditional endings of all verb-bases other than those with the *kārita* affix *-kk-*.... And this *-k-il* has become a characteristic Mal. conditional affix in bases of this type. Cf. *L*, II, 25.' (*EMM*, p. 84).

(ii) With *-il* or *-oḻikil* suffixed to the negative verbal form:
10th: *ceyyātoḻikil* (3-4).
11th. *oyāyil* (7-3), *ṅellaḷappāṉāṟṟātoḻikil* (8-6).
12th: *arutātoḻikil* (5-264).

(iii) With *ā-k-kāl* suffixed to the base:[23]
10th: *pāṭṭamiṭākkāl* (5-13), *celuttākkāl* (9-2), *porākkāl* (11-14).

(iv) With *alla* suffixed to the conditional form:
10th: *celuttukil-alla* (6-64).

(v) With the verbal participle *aṉṟi*, (*iṉṟi*) suffixed to the past stem a negative conditional sense is obtained:[24]
10th: *taṇṭam koṭutt-aṉṟi* (4-52), *iṭṭ-aṉṟi* (5-25).
12th: *kuṭi-iṉṟiye irukkil* (5-255).

B. *Concessives:*

(i) With *-um* suffixed to the conditional form of the verb:
10th: *piḻai ceyyilum* (1-19).
11th: *kuṟaiyilum* (8-5).

(ii) A concession of fact is expressed by affixing *-um* to the past stem:[25]
10th: *eppiḻai colliyum* (2-18).

Negative concessive:

A negative concessive is formed by affixing *-um* to a negative form having *-ā-mai* (Cf. *MOTV*, p. 778):
11th: *iṟāmaiyum* (5-14).

V. *The Infinitive Mood:*

The infinitive form of the verb is obtained by suffixing *-a* to the base[26] (which appears as *-kk-a* in kārita bases); exs. *iru-kk-a, vāḷa, koḷḷa*, etc. It is used chiefly in combinations to express ideas of obligation and prohibition. Followed by the substantival auxiliary *kaṭavaṉ* (*-var*) it functions almost as an adjective participle, the compound expressing the idea of obligation, while followed by the auxiliary verbal form *peṟār* it expresses the idea of prohibition. It is also used absolutely to express contemporaneous action. (See under 'Infinitive Participles' for examples).

23. In post-Śaṅgam Tam. *-kāl* is used as a conditional suffix.
24. *aṉṟi* and *iṉṟi* mean 'without' or 'unless' (see under 'Particles and Postpositions'. In the examples cited here they produce in effect a conditional sense.
25. Cf. Arden, *Tamil Grammar*, p. 203.
26. Cf. *CGD*, p. 323.

VI. The Negative Mood:

No negative finite verb is met with in the inscriptions except two instances of negative formations of the 'Neutraliser type' (see p. 134) with the 'defective' verbs *alla* and *illa*. (Cf. *Gundert, Grammar of Malayāḷam*, p. 339 ff.).

10th: *kūṭa-k-kaṭavar allar*, 'They are not bound to (they cannot) join' (4-52).
11th: *koṭukka kaṭamai illai*, 'They need not give' (3-4).

However, from the other negative formations in the inscrr. such as the negative conditional, it appears that a negative finite was usually formed in the Early Old Mal. period (as in the Late Old Mal. period) by infixing the negative particle *-ā-* between the base and the termination; Cf. *taṅṅu-cellāṉākil* (11 : 8-5). (Cf. *EMM*, pp. 94 ff.)

5. *Infinitive Participles:*

Two types of Infinitive participles are found in the inscriptions: the *-a* type and the *-vāṉ* (*-ppāṉ*) type. The *-a* type is used to express 'contemporaneity' or 'simultaneity' of action, 'effect' and 'purpose'. In combinations, it is also used to express ideas of 'obligation' and 'prohibition'. The *-vāṉ* type is used exclusively to express 'purpose'.

It is noteworthy that infinitive participles of both the *-a* and *-vāṉ* types existed in Middle Tam. (Cf. *V, Dhātu.*, 8), although Old Tam. had only the type with final *-a* (see *EMM*, p. 76). Also, it may be noted here that in course of time "the *-a* type began to be displaced in Mal. by other syntactic constructions, and (along with this) the *-vāṉ* type was also extended in usage and syntactic force" (*EMM*, p. 76).

The *-a* type is met with in modern Malayāḷam "only in some syntactic constructions, in a number of words with an 'adverbial', 'adjectival', or 'postpositional' force, and in a few old proverbs and phrases." (ibid.).

I. Infinitive participles of the -a type:

(i) Used before participles and verbal finites with the signification of 'effect':

10th: (a) before verbal participles:
uḷppaṭa iruṅṅaruḷi (2-35), *uṭpaṭa iruṅtaruḷi* (2-26).
(b) before verbal finites:
uḷppaṭa vaccu (2-10), *uḷḷoṭuṅṅa aṭṭikkoṭuttāṉ* (12-4), *mutalaṟa aṭṭik-kuṭuttāṉ* (12-4), *pora-k-koṭuttār* (?) (11-13).
11th: (a) *uḷḷoṭuṅka* . . . *uḷḷiruṅṅu* (7-1).

12th: (a) *kūṭṭamā iruññu* (5-252), (*ñālella*) *akappaṭa tōraṇamuññāṭṭi* (6-7).

(ii) Used to indicate 'purpose' (the type which modern Mal. would represent with the *-vān̲* type):

11th: *koṭukka* (*kaṭamai-y-illai*) (3-4), *per̲umatu per̲avum āka-c-ceppeṭṭōṭum ceytukoṭuttōm* (5-14).

12th: *tirukkaiñan̲aiccaruḷa* (2-42).

(iii) Used absolutely to express contemporaneous action:

10th: koyilumuḻḻirukka 'while assembled together' (?) (9-1), *emperumān̲ kāṇa* 'while the *emperumān̲* looks on; i.e. in the presence of the *emperumān̲*' (12-1), *Śrīvallapaṅkōtaiyuṭan̲ irukka* 'while sitting with Srīvallabhaṅkotai (13-20).

11th: *Nan̲r̲uḻaiñāṭuvāḻa* 'while ruling Nan̲r̲uḻaiñāṭu' (1-1).

12th: *koyilakatt-iruññaruḷa* 'while sitting in the temple' (2-21) *kūṭiyirukka* 'while assembled together' (2-57), (*koyikkaḻ koyilay*) *iruñtaruḷa* (5-2), *sabhai aruḷicceyya* 'when the *sabhai* requested' (5-5).

13th: *vāḻñtaruḷa* 'while ruling' (3-3), *tiruvuḷḷañceytaruḷa* (4-6), *irukka* (4-7), *ceyviccaruḷa* (caus., 4-8).

(iv) Used with the auxiliary negative verbal form *per̲ār* to express the idea of prohibition:

10th: *koḷḷa-p-per̲ār* (1-10), *taṭumār̲a-p-per̲ār* (1-19), *colla-p-per̲ār* (2-21), *kavara-p-per̲ār* (5-22), *atikārañceyya-p-per̲ār* (5-25), *or̲r̲ivaikkavum or̲r̲ikoḷḷavum per̲ār* (6-69), *vilakka-p-per̲ār* (9-2), *celuttikka-p-per̲ār* (caus.), *pāṭṭamāḷa-p-per̲ār* (12-5), *pukkuvilakkavum poruḷ kavaravum per̲ār* (13-14).

11th: *or̲r̲ikoḷḷavum uḻavu uḻavum per̲ār* (1-3), *or̲r̲ivaikkavum koḷḷavum per̲ār* (7-3).

12th: *vilakkavum vaikkavum aṭikoṭukkavum ati* (*kari*) *kkavum per̲ār* (5-249), *koṭukka-p-per̲ār* (5-272).

(v) Used with the auxiliary verbal form *per̲uvan̲* (*-var*) and the appellative form *kaṭavan̲* (*-var*) to express ideas of permission and obligation respectively, the whole form having the force of a polite imperative:

10th: *viyāparikka-p-per̲uvan̲* (1-15), *ceytukoḷḷa-p-per̲um* (1-17), *paḷḷiyārē ārāyñtukoḷḷa-p-per̲uvar* (1-20), *vittiṭakkaṭaviyan̲* (7-4), *tīrttukoḷḷa-k-kaṭaviyar* (2-47), *koṭukka-k-kaṭaviyar* (2-52), *ōṇamaṭa-k-kaṭavar* (3-3), *ūṭṭum-aṭa-k-kaṭavar* (3-4), *ūṭṭa-k-kaṭavar* (3-5), *koṭukka-k-kaṭaviyar* (6-89).

11th: *tīrttukoḷḷa-k-kaṭaviyar* (1-5), *eṭuttukoḷḷa-k-kaṭaviyar* (1-5), *aṭṭa-k-kaṭaviyar* (2-3), *kāṭṭikkoḷḷa-k-kaṭaviyar* (3-4), *cella-k-kaṭavaṉ* (6-21), *ārāṭṭa-k-kaṭavar* (8-2), *amirtuceyyikkakaṭavar* (caus., 8-3), *koṭukka kaṭavaṉ* (8-3) *viḷāppali puṟappaṭa-k-kaṭavar* (8-3), *aṭikka-k-kaṭavar* (8-4), *celutta-k-kaṭavar* (8-4), *taṇṭappaṭa-k-kaṭavar* (8-4), *iṭa-k-kaṭavar* (8-5), *koṭukka-k-kaṭavaṉ* (8-5), *rakakikka-k-kaṭavar* (8-6).

(vi) The infinitives *āka* and *kūṭa* are put to various uses:—

āka:

(a) Used idiomatically for summing up, when it has almost an adjectival force:

11th: *maṟṟum ṅakarattil kuṭikaḷ kōyilkku iṟukkumatu ivaṉ iṟāmaiyum peṟumatu peṟavum āka -c-ceppeṭṭōṭum ceytu koṭuttōm* (5-14).

12th: *āka ṅel* (5-73), *āka pāṭṭattāl* (5-91), *āka ṅilam* (5-211).

(b) Used after the dative particle to express a 'collective' idea:

12th: *tiṅṅaḷ iraṇṭiṉṉumāka* (5-41).

(c) Used in the sense of a distributive particle:

12th: *eḻuṅāḻi uricce ṅellāka* (4-25), *oru palam āka* (5-51), *ṅālppatu paṟai āka* (5-215).

(d) Used in delimiting boundaries:

10th: *kiḻakku ciṟuvātilkkāl matilē-y-ellai-y-ākavum paṭiññāyiṟu-kaṭalē-y-ellai-y-ākavum vaṭakku-t-tōraṇattōṭṭamē-yellai-y-ākavum vaṭakiḻakku-p-Puṉṉaittalai Aṇṭilaṉ tōṭṭamē-y-ellai-y-ākavum iṅṅaṉkellaikkum, etc* (2-12/15).

(e) Used as an adverbial particle to impart an adverbial force to nouns:

12th: *taḻivirutti-y-āka koḷḷuṅ-ṅel* (5-121) *tiruviṭaiyāṭṭamāka cellumāṟu-* (6-7).

(f) Used with a participial noun to form an indirect statement:

12th: *vēṇṭikkoḷvitākavum kaṟppiccumaikkum* (5-274), *koṭuppitākavum kaṟppiccu* (5-284).

kūṭa:

(a) Used to denote addition:

12th: .... *Maṇalūr ṅālppatu paṟai vittupāṭuṅkūṭa ṅilam eṇpatu paṟai* (5-196). See also (3-1), (5-11), (5-22), (5-93).

(b) Used in the sense of 'also' or 'in addition':

11th: *mikkum eḻupattiraṇṭu viṭupēṟum kūṭa-k-koṭuttōm* (5-12).

12th: *eppērppaṭṭatuṅ-kūṭa atikariccukoṇṭu* (6-4), *ṅālu kuṭi veḷḷāyāṭaraiyuṅ-kūṭa karppiccitu* (5-189).

13th: *poliyāluḷḷa mutaluṅ-kūṭa Ñārāṇaṅtātar kaikkoṇṭu*, etc. (5-6).

(c) Used in the sense of 'together', with an almost adverbial force:

10th: *payaṟum carukaraiyum vāḻaippaḻamum kūṭa ūṭṭa kaṭavar* (3-5).

11th: *viḻāvāriyarum potuvāḷoṭukūṭa aḷavu koṭutt-*, etc. (8-3).

12th: *pāṭṭa ñel muppatu paṟaiyuṅ-kūṭa kaikkoṇṭu* (7-19).

13th: *ari maṭai eṭṭu ñāḻiyum iraṇṭiṭattuṅ-tiruvaṟai vātilkkal orotiṅkaḷ orottili-c-cellumāṟu kalppicca tīpamālāikkuṅkūṭa eḻutikkoṭuttār atikārar* (5-4).

(d) The infinitive *oḻiya* is used as postposition in the sense of 'except':

13th: *Tirukkaṇṭiyūr Mahādevar tiruvuṭampu śrī pīṭamum oḻiya śrī vimā-ṉamum avikkiṉaṟum*, etc. (4-5).

II. Infinitive participles of the -vāṉ (-ppāṉ) type:

These are usually classified as adverbial future participles. GUNDERT even holds the view (*Grammar*, p. 203) that it is wrong to call them infinitives. But on considering the origin and development of this type (Cf. *EMM*, pp. 76 and 80), it would be clear that it is to be regarded mainly as an infinitive participle, although when it stands before a future verb-form it may function as a future adverbial participle (e.g. *maṉai mēyppāṉ koḷḷum iṟai*).

10th: *maṉai mēyppāṉ koḷḷum iṟai* (1-9), *Āvaṇiyōṇamaṭuvāṉ koṭutta pūmi* (3-2), *paṭāṟarai piṭippāṉ amaicca celavu* (6-21), *purai putukkuvāṉ palikkamaitta pūmi āvaṇa* (4-35).

11th: *ceyvāṉ amaiñña* (7-2), *koṭuppāṉ amaiññār* (3-3), *ñellaḷappāṉāṟṟātoḻi-vārākil* (8-5).

12th: *kalai*(*ca**) *māṭuvāṉ koḷḷu*(*m*) *ñey* (5-35), *viḷakku vaippāṉ* (5-45; used with the force of a verb-finite), *kāṇamaṭuvāṉ koḷḷuññel* (5-179), *taṇṇīr-yaṭuppāṉ* (5-187), *tiruvamitu ceytaruḷuvāṉ amaicca pūmi* (7-10), *koṭṭu-vāṉ* (8-11).

In the form *iruppāṉoḷḷitu* (12: 5-122), the infinitive participle *iruppāṉ* is used to form a participial noun as in modern Malayāḷam.

6. *Adverbial Participles.*

As already stated, the past stems (which are formed by adding *i* or *t* to the bases) function as adverbial participles (see p. 108).[27] The 'full' consonantal bases[28] as a rule take *i* to form their past forms, while the vowel bases and those ending in absolute final *ṇ*, *y*, *r*, *l*, *ḷ* and *ṉ* take -*t*-. Also, the monosyllabic bases with short vowels and ending in -*k*, *ṟ*, or -*ṭ* take -*ṭ*-, when on account of sandhi action the final consonants of these bases are doubled.[29]

27. Cf. *Kēraḷapāṇiṉīyam*, p. 232.
28. Cf. *ibid.* pp. 101-103 and 255.
29. Cf. *ibid.* 222-225.

Syntactically the adverbial participle follows its object and precedes the verb it modifies: *i-p-pūmi māvaṟa-k-koṇṭu mutalaṟa aṭṭikuṭuttān Kālkka-raiṅāṭuṭaiya Kaṇṇampuṟaiyan.*

The adverbial participles could be divided into two categories, according as they end in *-i*, or in *-u*.[30]

I. Adverbial past participles ending in *-i* (which are formed by affixing the past-tense forming *-i* to the 'full' consonantal stems without any change):—

10th: *piṭiṅaṭatti* (2-7), *kaiyyeḻuti* (12-6), *iruṅtaruḷi*[31] (2-7), *tuṭaṅki* (8-1), *kūṭi* (9-1), *tōṉṟi* (13-1), *kūṭṭaṅkūṭi* (13-5). In forms like *aṭṭi-k-kuṭut-tāṉ* (12-1), the adv. pp. forms part of a compound verb.

11th: (*ceṅkōl*) *ṅaṭatti* (5-3), *kaiyyeḻuti* (6-24), *avirōtattāl kūṭi-c-ceyta* (7-1), *tiruvuḷḷam avirōtamākki* (7-1), *vilakki* (7-2), *kūṭi* (8-5), *koṭṭi* (6-13), *muṭṭi* (8-5).

12th: *iruṅṅaruḷi* (1-15), *tiruvuḷḷampaṇṇi* (1-26), (*tirumukam*) *patiyuṟutti* (1-52), *vaṅṅukūṭi* (1-59), *kal eḻuti* (1-64), *tōṉṟi* (2-3), *kūṭi* (2-57), *uṉaṅṅi* (3-2), *iruṅtaruḷi* (4-5), *kalveṭṭi* (4-11), *koyiṟkuṟi* (4-18), *eḻuṅ-ṅaruḷi* (5-3), *culaṉṟukūṭi* (5-248), *kiṭatti* (5-279), *eḻuti* (6-2), *ṅīkki* (6-3), *ārāḻccapaṇṇi* (6-7), *ṅāṭṭi* (6-7), *taṭuttuvilakki* (8-28), *muṭṭi* (5-262).

13th: *kūṭi* (1-3), *keṭṭi* (1-10), *keṭṭi-c-cārtti* (2-2), *ceytaruḷi* (4-1), *eḻuti* (4-16), *celutti* (5-6).

II. Adverbial participles ending in *-u*:

The combination of *-t-* with various types of bases (for which see below; cf. also *Kēraḷapāṇinīyam*, pp. 224-27), produce the past adverbial participles with *-ttu* (> *-ccu* when preceded by a palatal phoneme), *ṅtu* (sometimes > *ṅṅ* or *ññ*), *-ṉṟu*, *-ṇṭu*, *-ṭṭu*, *-kku*, and *ṟṟu*.[32]

(i) *-tu*, *-ttu*:

10th: *-u* stems: *taṭu-ttu* (2-46), *ṅeṟuttu* (2-52), *rakṣiccukoṭuttu* (13-12).
-ai stem: *vaittu* (2-43).
-y stem: *ceytu* (1-14).
-r stem: *tīrttu* (11-16).

30. The *-u* participles are those in which the action of a past-tense forming morphophoneme *-t-* could be postulated (see p. 108). The *-u* here is a *samvrta*. which represents ɯ in compounds like *ceytu koṭuttōm* and ə in pausal positions. Cf. *Kēraḷa-pāṇinīyam*, p. 234.

31. Cf. ibid. p. 226.

32. See under Phonology, pp. 24-27.

11th: -*u* stems: *koṭuttu* (3-3), *aḷavukoṭuttu* (8-3).
-*y* stem: *ceytu* (8-5).
-*r* stem: *tīrttu* (7-3) (forms a compound verbal base *tīrttukoṭuppitu*).
12th: -*u stems: aḻivu koṭuttu* (4-29), *koṭuttu* (5-263); etc.
-*y* stem: *cekoppaṇi ceytu* (8-36).
-*r stems*: *pērttu* (5-5), *paṟaiññutīrttu* (5-263).
13th: -*y* stem: *ceytu* (5-2).
-*u* stems: *aṭuttu* (1-11), *koṭuttu* (5-9).

(ii) -*ccu* (< -*ttu*):

(a) -*ccu* suffixed to bases ending in *ai*:
10th: *camaiccu* (2-4), *vaccu* (2-32), *piḻaiccu* (6-58), *taṇṭam-vaiccu* (11-17), *taṭuttu vaccu* (12-7).
11th: *vaiccu* (6-20), *taṇṭam vaiccu* (8-4).
12th: *ṅaṉaiccu* (1-22), *vaiccu* (5-267), *vaḷaiccuvaccu* (8-28).
13th: *taṭuttuvaccu* (1-11), *camaiccu* (5-7).

(b) -*ccu* suffixed to bases ending in -*i*:
10th: *ilakkiccu* (2-35; Slw).
11th: *pirasāticcu* (5-5; Slw).
12th: *jīrṇṇiccu* (5-4; Slw.), *piṭiccu* (5-38), *atikariccu* (5-39), *kaṟpiccu* (5-281), *kalppiccu* (6-3; Slw).
13th: *muṭiccu* (4-15).

(c) -*ccu* associated with causatives:
10th: *kēḻppiccu* (12-6).
11th *vaippiccu* (6-21), *amirtu ceyyiccu* (8-2), *kārāṇmaicceyyiccu* (8-5).
12th: *kaḻikiccu* (5-275), *aṭṭiccu* (5-276), *koḷutticcu* (5-276), *pū(p)ṭṭiccu* 5-277), *pōkkiccu* (5-278), *cēviccu* (5-281), *ceyviccu* (6-4), *koṭuppiccu* (5-278), *vaippiccu* (7-20).

(iii) -*ṅ-tu*:
10th -*a stem*: *ciṟaṅtu* (1-2).
-*ā* stems: (with shortening of final *ā*): *vaṅtu* (1-16), *kuṇaṅtu* (1-15) (< *koṇṭuvā*).
-*u* stem: *iruṅtu* (6-12).
11th: -*u* stem: *uḷḷiruṅtu* (7-3).

(iv) -*ṅṅu* (< *ṅtu*):
-*ā* stem (with shortening):
11th: *vaṅṅiruṅtu* (3-4),
koṇṭuvaṅṅu (8-3).
-*u* stem: *uḷḷiruṅṅu* (7-1), *iruṅṅu* (8-1).

12th: -*ā* stem (with shortening of -*ā*: *konṭuvaṅṅu* (3-2).
-*u* stem: *kūṭṭamā iruṅṅuu* (5-252).

(v) -*ññu* (< -*ñcu*, < -*ṅtu*):

10th: -*i stem*: *uccitiriññu* (10-5).
11th: -*ai* stem: *paṟaiññu* (6-19). -*i* stem: *tiriññu* (8-3).
12th: -*i* stem: *kaḷiññu* (5-253).

(vi) -*ṉṟu*:

11th: -*l* stem: *ṅiṉṟu* (6-9) (<*ṅil*).
12th: *konṭuceṉṟu* (5-41), *ceṉṟu* (5-254) (< cel), *culaṉṟu* (5-248).
13th: *ceṉṟu* (1-12).

(vii) -*ṇṭu*:

10th: -*ṇ* stem (with shortening of the penultimate vowel):
kaṇṭu (2-5, etc., < *kāṇ*).
-*ḷ* stems (with the -*ḷ* changed to *ṇ* in sandhi):
koṇṭu (2-37, etc., < *koḷ*), *pāṭṭamāṇṭu* (11-15; < *pāṭṭamāḷ*-).
11th: -*ṇ* setm: *aḷavu kaṇṭu* (7-2).
-*ḷ* stem: *taṇṭam vaiccu-k-koṇṭu* (8-5), *uḷutukoṇṭu* (8-5; < *koḷ*, auxiliary).
12th: -*ṇ* stem: *kūṭṭi-k-koṇṭu* (1-13; auxiliary use), *kaikkoṇṭu* (4-23), *koṇṭu* (4-30; etc.), *aḷavu koṇṭu* (8-37).
13th: -*ṉ* stem: *kaikkoṇṭu* (5-6), *koṇṭu* (5-9).

(viii) Adverbial past participles showing the gemination of last consonant:

10th: *iṭṭu* (2-3, < *iṭ*-), *ṅaṭṭu* (2-2; < *ṅaṭ*-), *paṭṭu* (6-53; < *paṭkeṭṭu* (12-6; < *keṭ*-), *pukku* (13-14; < *puk*-).
11th *keṭṭu* (7-3), *paṭṭu* (8-4), *pukku* (8-5), *iṭṭu* (8-5).
12th: *taṇṭappaṭṭu* (2-98).
13th: *iṭṭu* (1-9).

(ix) -*ṟṟ*.

11th: *viṟṟ*- (*iraṭṭiccavaṇṇam*) (8-1; < vil).

Adverbial future participles:

The infinitive participle of the -*vāṉ* (-*ppāṉ*) type has the force of an adverbial future participle when it occurs before a future verbal form:[33]

Examples:

10th: *maṉai mēyppāṉ koḷḷum iṟai* (1-9).
12th: *kalaimāṭuvāṉ koḷḷuṅ-ṅey* (5-35), *viḷakku vaippāṉ koḷḷum tēṅkāy ṅey* (5-46), *kāṇamaṭuvāṉ* .... *koḷḷuṅ-ṅel* (5-179).

33. See p. 120.

Negative adverbial participles: (with the suffix *-āte*):

11th: *koṭṭātu* (*puḷḷippaṭil*) (7-2), *muṭṭāte* (*celuttakkaṭavar*) (8-4).

The adverbial participle is chiefly used, as in Tamil,[34] to express the action performed by the subject preceding or forming part of or leading up to the action of the principal verb. The past adverbial participles may be divided into the following categories according to their syntactic positions:—

(i) Modifying a finite verb:

10th: (*ceppupattirañ*) *ceyt-* (*aṭṭikkoṭuttēṉ*) (1-14), *ilakkiccu* (*vaippatākavum*) (2-35).
11th: (*kaiyyeḷuti-y-aṟivēṉ*) (6-24).
12th: *tirupuḷḷam paṇṇi-y-aruḷiyār* (1-26), *kal eḻuti* (*ṅāṭṭi-k-koṭuttār*) (1-64), *tirukkai ṅaṉaicc-* (*aruḷiyār*) (1-22).

(ii) Modifying an infinitive participle:

10th: *kuṇaṅtu* ... (*viyāparikka--kkaṭavar*) (1-15) *kaṇṭu* (*celutta*) *-k-kaṭavar* (4-48), *kārāṇmai-c-ceytu* (*vittiṭa-k-kaṭavar*) (7-42).

(iii) Modifying another adverbial participle:

10th: *maṟukutalai-c-ciṟaṅt-* (*aṭippaṭuttāḷāṅiṉṟa*) (1-2), *vēṇṭa-k-kēṭṭu-kēḷpiccu* (*kaiyyeḷuti aṟivēṉ*) (12-6).
11th: *tiruvuḷḷam avirōtamākki* (*uḷḷiruṅṅu*) (7-1).
12th: *koyiṟkuṟi* (*eḻuticcukoṇṭu*) (4-18), *taṭuttu vilakki* (*vaḷaiccu vaccu*) (8-28), etc.

(iv) Modifying an adjective participle:

10th: *ciṟāṅt-aṭippaṭutt-* (*āḷāṅiṉṟa yāṇṭuḷ*) (1-2), *i-ṅ-ṅakaram kaṇṭu* (*ṅīrēṟṟa Maruvāṉ Sapīṟ-Īśo*) (2-5).
11th: *avirōtattāl kūṭi* (*-c-ceyta kāriyam*) (7-1), *ceṅkōl ṅaṭatti* (*y-āḷāṅiṉṟa yaṇṭu*) (5-3).
12th: *kūṭi* (*eḻutiya ceyakaṭavōlaikkaraṇam*) (4-7).

(v) Adverbial participles used 'absolutely'.

10th: *uccitiriññu* (*irupattiṟṟaṭikku ari aḷakka-k-kaṭaviyar*) (10-5), *kōppatavāraṅ*) *-kōyil koṇṭu* (*patippatavāram añcuvaṇṇamum maṇikkirāmamuṅ-koḷvatāka* (2-37), (*perumāṉaṭikaṭkk-irupattaiṅkaḷaiñcu poṉṉum*) *paṭṭu* (*muṉṉam kōyiṟku paṅtiru kaḷaiñce añcu kāṇam poṉṉum*) *paṭṭu* (*Tāvaṉūr kaccaṉūr kaccamum piḷaiccu ūrkkum puṟamāvitu* (6-51/59).
11th: *itu koṭuttu* (*maṟṟeppērppaṭṭatum koṭukka kaṭamai-y-illai* (3-3).

34. Cf. Arden, *Grammar of Tamil*, p. 200.

12th: *Neṭiyataḻi iruññaruḻi (tirukkaiñaṉaiccaruḻiyāṟ)* (1-15), *puṟaikkūli ñīkki (āṇṭuvara vēṇṭuñ-ñel .... celuttivaruvitu)* (6-4).

(v) Adverbial participles with *-um* suffixed in order to express a concession of fact :—

10th: *eppiḻai colliyum* (1-18), *avirotattāl kūṭiyum* (9-2).

(vi) Adverbial participles functioning as conjunctives:

10th: *(mukkāl vaṭṭattu) iruñtu (ceyta kaccamāvatu)* (6-12), *(śrīmaṉṭapattil) vaiccu (aḻavu koṭukka-k-kaṭaviyar)* (10-3), *(kūṭṭaṅkūṭi iruñtaruliyeṭattu) vaccu..... (ñirōṭṭikkuṭuttār)* (18-5).
11th: *(Tiruñelli mukkālvaṭṭattu) ñiṉṟu (ceyta kaccam)* (6-3).

(vii) Verbal participles put to miscellaneous uses :

(a) *āyi* used as an expletive in passive construction:

10th: *Eśo-dā-Tapir-āyi ceyvitta Tarusāppaḻḻikku* (1-6).

(b) *āy* used with the force of an instrumental particle:

12th: *Uḻamalaikkalil Melcciṟnveṟu Iṭaicciṟuveṟu Kiḻcciṟuveṟum-āy-k-koḻḻuññel* (5-117).

(c) *eṉṉu* (< *eṉṟu*) used to introduce a quotation:

10th: *veṭṭiccukoḻka eṉṉu* (4-21).

(d) *kūṭi* used as a particle meaning 'together':

12th: *vittupāṭum puraiyiṭamum kūṭi* (1-52).

(e) *koṇṭu* used as an auxiliary:

11th: *taṇṭam vaiccu-k-koṇṭu* (7-5), *uḻutukoṇṭu* (8-5).
12th: *atikariccukoṇṭu* (6-6), *ceytukoṇṭu* (8-17).

(f) *koṇṭu* used as an instrumental suffix:

10th: *arikoṇṭu* (12-6), *ñeykoṇṭu* (3-7).
11th: *Etirañ-kaviraṉaikkoṇṭu* (8-5).
12th: *atikārikaḻaikkoṇṭu* (5-266).

(g) *kalppiccu* used more or less as an honorofic expletive as in modern Malayāḻam.

12th: *kalppiccuviṭṭukoṭutta* (6-3).

7. *Relative (or Adjective) Participles:*

As in Tamil and the other south Dravidian speeches, the past and the present relative participles end in *-a*, while the future relative participles end in *-um* (as in Tam.) and are identical with the aoristic future third person

singular neuter.[35] These participles function as relative pronouns as in all the other Dravidian languages.[36]

The relative participle is placed immediately before the substantive it refers to. When it is transitive it takes an object which precedes it.

Exs. (i) *Maruvān Sapīr Īso ceyvicca Tarisāpaḷḷikku kuṭutta bhūmiyāvatu.*

(ii) *i-c-celavu vaippān koṭutta uruḷi oṉṟu.*

The following points about the relative participles are specially noteworthy:—

(1) Relative participles ending in *-ṉa* appear in the earlier inscrr., as in the older texts, side by side with the corresponding *-iya* forms: *e.g.* (11th) *muṭṭiṉa* and *muṭṭiya*. The later inscrr. rarely show the *-iṉa* forms. (Cf. *EMM.*, pp. 81-82)

(ii) The relative participle sometimes takes the expletive *uṭaiya* in the earlier inscrr. In one instance (viz. *peṟṟuṭaiyaṉa ñāṉ*, 10: 1-11) an *uṭaiyaṉa* is also met with. Such *-aṉa* forms, it may be noted incidentally, occur in the older texts like *Rāmacaritam* (e.g. *civañtaṉa miḻikaḷōṭum*). (Cf. *EMM*, p. 82; *GML*, p. 72).

(iii) The particles *pōḻ* and *āṟu* are suffixed to future relative participles to denote specialised syntactic meanings (Cf. *EMM*, p. 82; *GML*, p. 73). E.g. (12th) *cellumāṟu* 'effect', *āṟāṭṭumpōḻ* 'time'.

(iv) The past relative participle of *āk-* is used to denote apposition, as in *Catiracikāmaṇi-y-āyiṉa kiḻāyaṭikaḷ* (10: 11-4).

In the form *cēkōppaṇi ceytu* (12: 8-36), *cēkō* (< *ceyva* < *ceyvava*) has become 'adjectival' as AIYAR has pointed out (see *EMM*, p. 83).

The past relative participles may be classified as follows, according to the nature of the past stems from which they are formed:

(i) Ending in *-ta, -tta, -cca* (< *-tta*):

10th: *-u* stem: *kuṭutta* (1-6).
-ai stem: *amaitta* (4-28), *amaicca* (6-72).
-y stems: *ceyvitta* (caus., 1-6), *ceyvicca* (caus., 2-5), *ceyta* (3-1).
11th: *-u* stem: *koṭutta* (6-27).
-ū stem: *mūtta* (6-8).
-ai stem: *amaicca* (7-2).
-y stem: *ceyta* (6-3).

35. cf. CGD, pp. 411, 14.
36. Ibid, p. 410.

12th -*a* stem: *amacca* (7-11).
-*i* stems: *kalppicca* (5-55), *kiḻicca* (5-207).
-*u* stem: *koṭutta* (8-13), *viṭṭukoṭutta* (6-3), *kaṭaṅkoṭutta* (8-20).
-*ai* stem: *amaicca* (2-107), *vaicca* (1-87).
-*y* stem: *ceyta* (6-1).
13th: -*i* stem: *kalppicca* (5-3).
-*u* stem: *koṭutta* (2-3).
-*y* stem: *ceyta* (2-1), *ceyvicca* (caus., 4-16).

(ii) Ending in *ñca* (< -ṅta), -*ñña* (< -*ñca*).

10th: -*ai* stem: *amaiñca* (6-40), *amaiñña* (1-10).
11th: -*i* stem: *oḻiñña* (7-2).
-*ai* stem: *amaiñca* (6-8), *amaiñña* (7-2).
12th: -*a* stem: *amañca* (6-1).
13th: -*a* stem: *amañca* (5-2).

(iii) Ending in -*ṅta*, -*ṅṅa* (< *nta*).

11th: -*u* stem: *kuṭi-iruṅta* (7-1).
12th: -*a* stem: *kiṭaṅta* (4-14), *piṟaṅṅa* (5-178).
-*ā* stem (with shortening of -*ā*): *vaṅṅa* (2-22), *taṅṅa* (5-4).
-*u* stem: *iruṅṅa* (2-35).

(iv) Ending in -*ṉṟa*:

10th: -*l* stem: *ṅiṉṟa* (7-3).
11th: -*l* stems: *ṅiṉṟa* (3-2), *ceṉṟa* (6-3)).
12th: -*l* stems: *ceṉṟa* (2-9), *ṅiṉṟa* (3-1).

(v) Ending in -*ṇṭa*:

10th: -*ḷ* stems: *iṭaikkoṇṭa* (9-1), *ñāyiṟ-āṇṭa* (13-2).
11th: -*ḷ* stems: *putaṉ-āṇṭa* (6-3), *ēṟṟukoṇṭa* (6-14)
13th: -*ḷ* stems: *āṇṭa* (3-2), *koṇṭa* (5-6).

(vi) Ending in -*ṟṟa*:

10th: -*l* stem: *ṅīrēṟṟa* (2-5).

(vii) Ending in -*iṉa*, -*ṉa* (-*ṉṉa*), -iya:

10th: -*k* stem: *āṉa* (2-50), *āyiṉa*[37] (11-4).
-*r* stem: *uyariya* (13-3).
-*ḷ* stem: *iruṅtaruḷiya* (13-5).

37. A. R. Rajaraja VARMA observes (Kēraḷapāṇinīyam, p. 227) that *āyi* and *pōyi* are instances of irregularly formed past stems. But since *āk*- and * *pōk*- are the roots concerned here, we should normally expect -*āki* and *pōki*, and we find both the forms in Old Kannada (cf. *HGOK*, pp. 78 and 289). Medial -*k*- sometimes changes to -*y*- in the Tamil-Malayalam group (see p. 22) and the past stems of *āk*- and * *pōk*- have obviously been affected by this change.

11th: *ṭṭ* stems: *aṭṭiṉa* (7-2), *muṭṭiṉa* (7-2), *muṭṭiya* (2-5).
-*l* stem: *coṉṉa* (7-1) (<*Col*).
ṟ stem: *ēṟiṉa* (7-2).
-*ḷ* stem: *iruṅtaruḷiya* (5-5), *pirasāticcaruḷiya* (5-5).
12th: -*ṭṭ* stem: *āṟāṭṭiṉa* (5-56).
-*t*, -*tt* stems: *eḷutiya* (4-87), *cāttiṉa* (5-194).
-*ḷ* stem: *aruḷiya* (1-68), *iruṅṅaruḷiya* (7-7).
13th: -*ḷ* stem: *iruṅṅaruḷiya* (1-3), *muṭiccaruḷiya*, *āṭiccaruḷiya* (4-16).

(viii) Forms showing the gemination of last consonant:

10th: *paṭṭa* (1-22), *collappaṭṭa* (13-17).
11th: (*ceppēṭṭil*) *paṭṭa* (*ilēkaiyiṉāl*) (6-14), *keṭṭa* (7-1), *puḷḷippaṭṭa* (*ṅel*) (7-2).
12th: *iṭaippaṭṭa* (*ṅilam*) (5-22), (*Viyāḻaṉ*) *pukka* (*Ciṅṅañāyiṟu*) (2-7).
13th: *iṭaippaṭṭa* (4-4).

(ix) Forms with -*uṭaiya*, -*uṭaiyaṉa* suffixed to the past stems:

10th: *peṟṟuṭaiya* (*pārkkōlum*) (2-51), *peṟṟuṭaiyaṉa* (*ṅāṉum*) (1-11).
11th: *koṭuttuṭaiya* (*ṅel*) (8-1).

Negative Past Relative Participle:

11th: *koṇṭuvārātoḻiñña* (*kaṇattāṉ*) (8-5).

II. *Present Relative Participles:*

(i) Ending in -*ā*-*ṅiṉṟa*:

10th: -*ḷ* stem: *āḷāṅiṉṟa* (1-2). -*l* stem: *cellāṅiṉṟa* (2-1).
11th: -*ḷ* stem: *āḷāṅiṉṟa* (5-3). -*l* stem: *cellāṅiṉṟa* (7-1).
12th: *cellāṅiṉṟa* (1-7).
13th: *cellāṅiṉṟa* (4-1).

(ii) Ending in -*k*-*iṉṟa*:

10th: -*ḻ* stem: *vāḻkiṉṟa* (1-3), -*y* stem: *atikārañceykiṉṟa* (13-23).
11th: -*y* stem: *paṇiceykiṉṟa* (1-2). -*ḻ* stem: *vāḻkiṉṟa* (6-5).
12th: -*ḷ* stem (with the enunciative -*u*-): *vāṇṇaruḷukiṉṟa* (3-1).
-*i* stem: *aṭi*-*k*-*kiṉṟa* (5-78).
-*u* stem: *iru*-*k*-*kiṉṟa* (5-203).
13th: -*ḷ* stem: *vāḻṅtaruḷukiṉṟa* (5-1).

(iii) Ending in -*iṉṟa*, -(*u*)*ṅṅa* (< *iṉṟa*):

10th: -*k* stem: *ākiṉṟa* (7-19). -*ḻ* stem: *vāḻiṉṟa* (2-8).
11th: -*y* stem: *ceyyiṉṟa* (5-26).
-*ḻ* stem: *vāḻiṉṟa* (7-1), *vāḻuṅṅa* (7-3).
12th: -*ḷ* stem: *paḷḷikoṇṭaruḷiṉṟa* (3-1), *vāḻṅtaruḷiṉṟa* (5-1).
-*y* stem: *cāṅticeyiṉṟa* (4-28).

13th: *ḷ* stem: *vāḻṅtaruḷiṉṟa* (4-7).

(iv) Ending in *-a*:

10th: *-ḷ* stem (with the sandhi doubling of the *-ḷ*): *uḷḷa* (1-21).
11th: *uḷḷa* (7-1).
12th: *oḷḷa* (1-41, etc.). *-ai* stem (with the glide *-y-*): *ṅiṟaiya* (*ṅey*) (5-276).
13th: *oḷḷa* (1-7, etc.).

The present relative participle *uḷḷa* is sometimes used with dative forms to convey a 'possessive' sense; e.g., *ivaṉṉuḷḷa kūṟum, avaṉṉuḷḷa paṭakāramum* (11 : 7-1).

Negative Present Relative Participle:
12th: *aṟiyarutāte irukkiṉṟatu* (5-4).

III. Present-future Relative Participles:

These are formed by adding *-um* to all types of bases. Before affixing *-um* the glide sound is inserted or the final consonant is doubled according to sandhi rules:

Examples:—

10th: *aṟi-y-um* (12-5), *ēṟum* (1-7), *koḷḷum* (1-9), *vilaiyiṭum* (2-33), *ūṭṭum* (2-32), *paṭum* (2-34), *vilakkum* (2-36), *koṭukkum* (2-36), *ceyyum* (2-47), *cellum* (5-2), *piḻaikkum* (5-22), *paṟṟum* (7-19), *porum* (7-24), *ārātikkum* (10-3), *amaiyum* (12-4), *poliyiṭum*.
11th: *varum* (7-3).
12th: *koḷḷum* (2-26), *paṭum* (4-15), *koṭukkum* (5-44), *eḻuṅaḷḷikku* (*m*) (5-73), *iṭaiṅiṟkkum* (5-143), *irukkum* (5-249), *kuṟaiṅōkkum* (5-254), (8-15), *okkum* (8-16), *tarum* (8-25).
13th: *vēṇṭum* (1-5), *cellum* (1-11), *koḷḷum* (5-2).

As already stated (see p. 96) the relative participles function as adjectives.

The relative participial forms of *āk-* are used to denote apposition:
Past:—
10th: (*iṅṅkaraṅkaṇṭu ṅirēṟṟavarum*)*-āṉa* (*Sapīr Iśō*) (2-50), (*Catiracikāmaṇi*) *āyiṉa* (*kiḻāyaṭikaḷ*) (11-4).
11th: (*Ñārāyaṇaṉ Vāsutēvaṉ*) *āyiṉa* (*Nelkuṉṟaṭikaḷ*) (6-15) (*Vikkiramaṉ*) *ākiya* (*atikāraṉ*) (6-22), *Kaṇṭaṉ-kuṉṟappoḷaṉ āya kīḻvāykēḷppāṉ* (5-2).
Present:
10th: *Iraññitāṟ-ākiṉṟa pūmi* (7-19), *Vaḷḷōkkaṇṇārvēli-y-ākiṉṟa pūmi* (7-25).
11th: *Payiṟṟāṭṭiṉ-ākiṉṟa ṅilattil* (7-1), *Kaḷattiṉāloṭi-y-ākiṉṟa pūmi* (8-1).

Relative participles are combined with certain particles to denote specialised syntactic meanings. (Cf. *EMM*, p. 82).

(i) With *pōḻ* (< *poḻutu*) to denote 'time':
12th: *āṟāṭṭumpōḻ tiruvamirtiṉṉu*, etc. (5-56).

(ii) With *āṟu* to denote 'effect':
12th: *cellumāṟu* (6-7), *kiṭakkumāṟu* (5-281).
13th: *ceyyumāṟu* (5-3).

8. *Participial Nouns.*

Verbal participles of all the three tenses with personal endings or with *avaṉ, avaḷ, avar, atu* suffixed, form participial nouns which are declined like regular nouns. Only third person participial nouns are met with in the inscriptions.

The following points about the participial nouns are noteworthy:—

(i) The existence of forms like *ńīrēṟṟār, uḻuvār*, etc. on the one hand and *mūttōr, paṟippōr* on the other in the 10th and 11th century inscriptions suggests the possibility that *ōr* may be only a phonetic variant of *ār*. This is the view of the early Tamil grammarians (Cf. *TC*, 211, 212; N, 394); but CALDWELL thinks that *ōṉ* is due to the coalescence of *a-v-aṉ*. P. S. S. SASTRI (*HGT*, p. 123) agrees with the traditional view, while L. V. R. AIYAR (*MOTV*, p. 775) appears to support CALDWELL's opinion.

It is true that *avaṉ* is contracted into *ōṉ* in modern North Malayāḷam colloquials as AIYAR points out, but there seems to be no reason why *ōṉ* should not have arisen as a phonetic variant of *āṉ* in the early history of the Tam.-Mal. group. In this connection it may be noted that the avaṉ-type of participials are less numerous in the earlier Tamil texts (Cf. *MOTV*, and *EMM*, p. 92), which suggests that the *avaṉ*-form may have been a 'false restoration' arising from a feeling that *avaṉ* was the fuller form of *āṉ*.

(ii) Future participial nouns like *ńāṭuvāḻumavar* occur numerously in the inscriptions. This type, it may be mentioned here, has gone out of use since the Old. Mal. period.

(iii) *āvatu*, the future participial noun of *āk-*, is used, as in Tamil,[38] to introduce a statement; e.g. *ceyta kaccam āvatu* (10 : 6-13), *amaitta pūmiyāvaṉa* (10 : 4-35).

The participial nouns occurring in the inscriptions may be classified as follows:—

Nominative.

From past rel. participles:

38. Cf. ARDEN, *Tamil Grammar*, p. 286.

Masc.

10th: *sg.* with *-āvaṉ*: *koṭuttavaṉ* (6-69), *mūttavaṉ* (9-2).
(ep.) pl. with *-ār, -avakaḷ, -var, -avarkaḷ, -ōr*: *ñīrēṟṟār* (2-48) *mūttavakaḷ* (4-48), *paṅkuceytavar* (4-50), *koṭuttavarkaḷ* (6-102), *mūttōr* (9-2).

11th: sg. with *-avaṉ, -āṉ*: *muṭṭiccavaṉ* (2-4), *kōṉōyiṉmaikoṇṭāṉ* (3-1), *ceytavaṉ* (7-3).
pl. with *ōr, -avar*: *kāṭṭiccōr* (3-5), *paṭṭavar* (7-2).

Neut.

10th: pl. with *-avai*: *amaiñcavai* (6-42).

13th: sg. with *-atu*: *piratiṭṭaipaṉṉiccaruḷiyatu* (2-3).

From present rel. pp.:

Masc.

10th: pl. with *-ār, -ōr*: *uḷuvār* (4-49), *vilakkuvār* (4-49), *paṟippōr* (4-49).

11th: sg. with *-avaṉ*: *kīḻccāntiyuṭaiyavaṉ*[39] (7-2).

12th: pl. with *-avaraḷ* *paṉiceyyiṉṟavaraḷ* (6-3), *kāriyañceyyiṉṟavaraḷ* (6-3).

Neut.

12th: sg. with *-tu*: *iruppāṉoḷḷitu* (5-122).

From present-future rel. pp.:

Masc.

10th: sg. with *avaṉ*: *muṭṭikkumavaṉ* (12-7), *ceyyumavaṉ* (15-15), *pāṭutāṅkumavaṉ* (13-16).
pl. with *-avaraḷ*: *ñāṭuvāḷumavaraḷ* (12-5), *aṉupaṅtam paṟaiyumavakaḷ* (9-2).

11th: sg. with *avaṉ*; *oṟṟikoḷḷumavaṉ* (1-3), *pāṭutāṅkumavaṉ* (1-4), *muṭṭikkumavaṉ* (6-20) *kīḻccāṅticeyyumavaṉ* (7-2), *irukūṟupaṟaiyumavaṉ* (7-3).
pl. with *-avaraḷ, -avar*: *vilakkumavaraḷ* (1-5), *cāṅticeyyumavaraḷ* (1-5), *uttiraviḷāceyyumavar* (8-5).

12th: sg. with *-avaṉ*: *kuḷamaṭikkumavaṉ* (5-82), *celavuceluttumavaṉ* (6-3).
pl. with *-avar, avaraḷ*: *vāriyañceyyumavar* (5-83), *paṉiceyyumavaraḷ* (6-3).

13th: pl. with *avaraḷ*: *pāṭṭamāḷumavaraḷ* (1-6).

Accusative:

From past rel. pp.:

Masc.

13th: pl. with *-avarai*: *tiruvuḷḷamāyavarai* (5-10).

39. For a note on *uṭaiya* in Tamil-Malayāḷam, see ARDEN, op. cit., p. 280.

Neut.

10th: sg. with *-atu*: *kuraiññat(u)* (11-14), *aṭṭippērukoṇṭatu* (13-8).

From present rel. pp.:

Masc.

11th: pl. with *-avakaḷai*: *paṇiyuṭaiyavakaḷai* (7-3).

Neut.

10th: sg. with *-atu*: *oḷḷatu* (7-32).
11th: -do.- : *piṉuḷḷatu* (7-1).
12th: -do.- : *irukkiṉṟatu* (5-5).

From present-future rel. pp.:

Masc.
10th: sg. with *avaṉ*: *parayumavaṉai* (12-4).
11th: pl. with *avar*: *ṅāṭuvāḷumavarai* (7-3).
Neut.
10th: pl. with *-aṉa*: *iṭuvaṉa* (2-3), *ṅaṭuvaṉa* (2-2).
11th: sg. with *-atu*: *irukkumatu* (5-14), *perumatu* (5-14).

Dative.

From past rel. pp.:

Masc.

11th: *vāticcōrkku* (1-4).
10th sg. with *-avaṉ*: *ṅaṭṭavaṉukku* (5-1).

Neut.

12th: sg. with *-atu*: *pirāmaṇar amirtuceytatiṉṉu* (5-56), *muṭṭiyatiṉṉu* (5-265),

From present rel. pp.:

Masc.

10th: pl. with *-ōr*. *parippōrkku* (4-50).
11th: pl. with *-avar*: *vāḷkkai-uṭaiyavarkku* (1-4).
12th: sg. with *-avaṉ*: *veppavaṉṉu* (5-100), *tiruppaḷḷittāmaṅ-koṭṭiṉṟavaṉṉu* (5-102).

From present-future rel. pp.:

Masc.

10th: pl. with *-avar, -avaraḷ*: *vilakkumavaraḷkku* (9-2), *ṅāṭuvāḷumavarkku* (9-2).
11th: sg. with *-avaṉ*: *vāḷumavaṉukku* (7-3).
pl. with *-avar, -avakaḷ*: *ṅāṭuvāḷumavarkku* (1-3), *ṅāṭuvāḷumavakaṭkku* (2-5).

12th: sg. with *-avaṉ*: *kuḷamaṭikkumavaṉṉu* (5-83), *tiruppaḷḷittāmaṅkoṭṭumavaṉṉu* (5-102), *koṭṭumavaṉṉu* (8-18).

pl. with *-avar*: *iḷaṅkūṟuvāḷumavarkku* (5-272).

Genitive:

From present-future rel. pp.:

Masc:

12th: sg. with *-avaṉ*: *kuḷamaṭikkumavaṉ* (*cīvitattiṉṉu*) (5-82).

pl. with *-avaraḷ*: *śrīkāriyañceyyumavaraḷ* (*kaiyil*) (7-25).

Locative:

From present-future rel. pp.:

Neut:

10th: sg. with *-atu*: *varumatil* (2-30).

Negative participial noun:

12th: *aṟiyarutāte irukkiṉṟatu* (5-4).

9. *Verbal Nouns:*

It is possible to derive many of the primary substantival bases from the corresponding verbal roots (see footnote on p. 44). Still others are obviously formed from verbal bases by the addition of a suffix (see 'Derived Secondary bases', p. 44). Of these latter a good many resemble the primary bases since they have come to denote definite ideas as a result of semantic change or extension; for example, *aḷavu, celavu, vāḻkkai, kārāṇmai, vilai, oḷukkam,* etc. Some may, however, be classed as 'verbal nouns', since they denote the action of the verb. (Cf. *CGD*, p. 431).

The following verbal noun types occur in the inscriptions:—

10th: *varatt-il*, 'in coming' (2-30; loc. < *vā*), *pōkk-il*, 'on going out or outgoing' (2-30; loc. *pō*).

11th: *aruḷicceykai-y-āl*, 'on account of commanding' (3-4); instr. <*aruḷiccey*), *iṟāmai*, 'not paying' (5-14; < *iṟu*).

12th: *piracattipaṇṇiṉamai-kku*, 'to the effect of having been published' (?) (5-284; dat. < *piracattipaṇṇ-*).

13th: *āṭiccaruḷiyamai-kku*, 'to the effect of having been published' (?) (4-16; dat. < *āṭiccaruḷ-*).

It may be noted here that the verbal nouns in the inscriptions are identical with Tamil verbal nouns, both functionally and structurally (Cf. *CGD*, pp. 431 ff.; *EMM*, p. 87).

10. Negative Formations:

The negative formations in the inscriptions may be divided into two main groups: (1) those of the Neutraliser type with *alla* ('is not'), *illa* ('is not, does not exist') and their derivatives affixed to the affirmative forms; and (2) those showing the negative affix *ā* followed by the verbal suffixes.[40] In the prohibitive form *peṟār* (10: 1-19; etc.) and the negative conditional *taññucellāṉ-ākil* (11: 8-5), the negative particle *-ā-* may be postulated; but, if they are analysed as *peṟ-* + *-ār* and *taññucel* + *-āṉ* (+ *ākil*) respectively (i.e., stem + personal termination), they may be classed as instances of the Zero negative; which is a usual phenomenon in Dravidian, particularly in the Tam.-Mal. group.[41]

Only third person negative formations are met with in the inscriptions. It is interesting to note here that the negative affix *ā*, which is a peculiarity of the Tam.-Mal. group, appears to have been originally confined to the third person 'neuter' forms.[42] But from the earliest known literary period in Mal. the negative form with *ā* is used with all persons and numbers.[43] As Prof. L. V. R. Aiyar observes, it was this obliteration of the original 'neuter' plural function that perhaps led to the *-ā-* form being considered as a negative verb stem to which tense endings or verbal suffixes were attached and to the unique Mal. negative forms being constituted (Cf. *EMM*, p. 94).

The negative forms in the inscriptions are given below:—

(1) *The Neutraliser type*:

(i) Negative mood (complete negation):

10th: *kūṭa-k-kaṭavar-allar* (4-52). 'They are not to (cannot) join.'
11th: *koṭukka kaṭamai-illai* (3-4), 'They need not give'.

(ii) Negative optative:

10th: (*aḻivulk-*) *illai-y-ākavum*, 'May it not be (may they be exempted from the port-duty ?)'.

(iii) Negative conditional:

10th: *celuttukil allatu*, 'If not delivered' (6-64), *taṇṭam koṭutt-aṉṟi*, 'If the fine is not paid' (4-52), *iṭṭ-aṉṟi* 'If (it is) not given' (5-25).
12th: *kuṭi-iṉṟiye irukkil* (5-255), 'If it is not inhabited'.

(2) *The type with the affix -ā-*:

40. Cf. A. Master, 'The Zero Negative in Dravidian'. *Transactions of the Philological Society* (1946), pp. 140 ff.
41. Cf. *HGT*, pp. 172-174; A. Master, ib. p. 140.
42. Cf. *HGT*, pp. 172-174; *EMM*, p. 94; A. Master, ib. p. 142.
43. Cf. *EMM*, p. 94; A. Master, ib. p. 142.

(i) Negative optative:

10th: *āḷkkācu koḷḷa-p-peṟār-ākavum,* 'May they not take the *āḷkkācu* (2-2).

(ii) Negative conditional:

(a) 10th: *ūṭṭātoḻivār-āyiṉ,* 'If (they) do not do the feeding' (12-7).
11th: *celuttātoḻivārākil,* 'If (they) do not pay (or deliver) (8-4), *taññucellāṉ-ākil,* 'If he does not give' (8-5).

(b) 10th: *ceyyāt-oḻikil* (3-4), 'If not done'.
11th: *ōyāyil,* 'If not settled' (7-3), *ńellaḷappāṉāṟṟāt-oḻikil,* 'If (it is) not possible to measure out the paddy (8-6).
12th: *arutāt-oḻikil,* 'If (it is) not possible' (5-264).

(c) 10th: (*pāṭṭam*) *iṭākkāl,* 'If (the dues) are not paid' (5-13), *celuttā-k-kāl,* 'If not paid' (9-2), *porā-k-kāl,* 'If (it is) not sufficient.

(iii) *Negative concessive*:

10th: *iṟāmaiyum,* 'Even without giving' (1-14).

(iv) *Negative imperative*:

13th: *koḷḷa-p-peṟār,* 'Should not take' (1-10), *vārātēceyya-k-kaṭavar,* 'Should see that it does not come (i.e., prevent) (2-4).
11th: *peṟār,* 'Should not' (1-3).
12th: *koṭukka-p-peṟār,* 'Should not give' (5-272).

(v) *Negative participles*:

(a) Adverbial:

10th: *koṭṭātu,* 'Without beating the drum' (7-2), *muṭṭāte,* 'Without failing' (8-4).

(b) Relative:

11th: *koṇṭuvārāt-oḻiñña,* '(He) who does not bring' (8-5).

(c) Relative participle in compounds:

10th: *ńańtā-viḷakku,* 'The lamp which does not go out' (12-3).
muṭṭā-viḷakku, 'The lamp which does not fail' (5-7).
11th: *ńańtā-viḷakku*

(vi) *Negative participial noun:*

12th: *aṟiyarutāte irukkinṟatu,* 'That which it is impossible to know' (5-4).

11. Appellatives.

The appellative formations found in the inscriptions are generally third personal ones. The form *iravi-kuṉṟappōḻaṉēṉ,* 'I (who am) Iravi-kuṉṟappōḻaṉ' occurring in a tenth century inscription may be regarded as an instance of a first person appellative formation.

The following is a list of the appellatives in the inscriptions:

10th: *paḻḻiyār* (2-18), *talaiyār* (2-49), *kaṭaviyar* (2-47), *kaṭavar* (3-3), *sabhaiyār* (4-56), *kaṭaviyōṉ* (4-59), *kaṭaviyaṉ* (2-47), *vāḻkkaiyāṉ* (5-2), *taḻiyār* (5-23), *atikārar* (5-23), *paraṭaimār* (6-7), *ūrār* (9-1), *iṭaiyiṭar* 13-14).

11th: *kaṇattār* (1-2), *iṭaiyiṭar* (1-3), *tirukkōyiluṭaiyār* (1-3), *kaṭaviyar* (1-5), *kūṟṟār* (2-4), *paraṭaiyār* (3-2), *kaṭavaṉ* (6-21), *ūrār* (7-1), *capaiyār* (7-1), *kaṭavar* (8-2).

12th: *vāḻkkaiyāṉ* (2-48), *mēṟpaṭiyāṉ* (8-19), *mēṟpaṭiyārkkuḷḷa* (8-27).

13th: *atikārar* (5-5).

Of these appellatives, the *kaṭavaṉ*-forms alone are used as appellative verbs; the rest are used as appellative nouns. (Cf. *CGD*, p. 369).

APPENDIX TO CHAPTER VI.

A LIST OF VERBAL BASES FOUND IN THE INSCRIPTIONS: —[1]

10th Century

Intransitives :

* *atikārañcey*	: to exercise authority (5-25; < Skt. *adhikāra*).
* *amai* (*ama*)	: to be settled or fixed up (6-73).
al	: base of the appellative verb that negatives the attribute of things (4-52).
anukkirāmañcey (error for *anukkirakañcey* (?)	: to bless (1-26; < Skt. *anugraha*).
ā (*k*)	: to be (1-12).
iru	: to remain, to be seated (2-7).
* *illaiyāk-*	: to be no more (2-28).
uṇṭāk-	: to come into existence; to arise (2-47).
uḷ (*oḷ*)	: to be (1-21); to have (13-6).
uḷpaṭ-	: to know, understand * (2-10); to be included (2-26).
uḻḻoṭuṅṅ-	: to be included (12-4).
okk- *	: to be consistent with (1-27).
oḻi	: to be excluded (4-44).
kuṟai	: to become less (11-14).
kūṭ- (*kūṭṭaṅkūṭ-*)	: to participate * (?) (4-52); to assemble (9-1).
keṭ-	: to be ruined (4-51).
cār-	: to be related or connected (12-4).
* *cimāvāk-* (?)	: to be confiscated (?) (6-71).
* *taṇṭappaṭ-*	: to be fined (13-17).
tiri	: to turn (10-5).
tuṭaṅk-	: to begin (3-55).

1. The frequently occurring compound bases also have been given here. In compiling this list only verbal finites and participial forms have been taken into consideration: the verbal roots in forms like *naṅtāviḷakku*, *ēvaḷāḷ*, etc., have been left out of account since these bases (which do not occur in verbal forms) may have ceased to be active in the period under consideration, though they are preserved in 'crystallised' compounds.

A prefixed asterisk indicates that the base concerned is not used in modern Malayāḷam, while a suffixed asterisk indicates that the base has undergone semantic change or narrowing. Where semantic narrowing has taken place, the sense which is not current in modern Mal. is marked with an asterisk. (It needs hardly to be pointed out here that an archaic base may sometimes appear in modern poetic compositions).

tōṉṟ- * : to appear, to come into existence, to be born (13-1).
ńaṭa : to walk (3-7).
ńil : to stand (13-2).
paṭ- : to be contained or included (2-24).
paṟṟ- : to be sufficient (7-19).
piḻai : to do wrong; to fail (6-99).
* *puk-* : to enter; (to interfere ?) (13-14).
poru (*pōru*) : to be enough or sufficient (7-24).
muṭṭ- : to be hindered (4-71).
vā (*varu*) : to come (1-17).
viyāpari-kk- : to operate, act, to ply one's trade (1-15; < Skt. *vyāpṛ-*).

Transitives and Causativo-transitives:

aṭ- : to celebrate (?) (3-2); to give (3-3).
* *aṭippaṭutt-* : to subdue (1-2).
* *aṭṭ-* : to endow (1-14).
* *aṭṭikkuṭu* : to give as absolute possession (1-14).
* *amai-kk-* (*ama-kk-*) : to institute, ordain (6-72).
* *aḻi* : to destroy, to bring to a close (6-96).
* *aḷa* : to measure (7-36).
aḷavukoṭu : to measure out (10-3).
aṟi : to know (13-21).
aṟu : to sever; to end connection completely (12-4).
ārāti-kk- : to worship with oblations (10-5; < Skt. *ārādh*).
ārāy : to investigate, consider, deliberate upon (2-47).
āḷ- : to rule, reign over, govern (1-2).
iṭ- : to give; to pay, as fine (5-25).
irakṣi-kk- : to protect (2-22; < Skt. *rakṣ-*).
uṇṭāk- (*oṇṭāk-*) : to occur, to come into existence (2-47).
uyar- : to be high, elevated, lofty (13-3).
uḻu- : to plough (4-49).
ūṭṭ- : to feed (3-7).
* *eri-kk-* : to burn, as a lamp (11-6).
eḻut- : to write (12-6).
ēl * : to receive (2-5).
oḻi : to leave off, give up (4-44).
* *oṟṟivai* : to mortgage (6-67).
oṟṟikoḷ : to take as mortgage (6-68).

kavar- * : to take by force (13-14).

kāṇ * : to found (2-5); to see (10-3); to supervise (4-48).

* _kāṟāṇmaicey_ : to hold tenancy (7-12).

kuṭu (_koṭu_) : to give (1-6).

kutt- : to pound (7-13).

* _kuṇa_ (< _koṇṭuvā_ ?) : to bring (2-15).

kūṭṭ- : to unite, join, combine (2-34).

keṭ- : to lose (9-2).

kēḷ : to hear (12-6).

koṭu (_kuṭu_) : to give (13-11). (Used as auxiliary, 13-12).

koḷ : to receive (1-9). (Used as auxiliary; 2-47).

* _camai_ : to ordain (2-4).

* _ciṟa_ : to surpass, excel (to resist ?) (1-2).

cey * : to make * (1-6); to do, perform (1-14).

celuttu * : to execute (1-2); to pay * (9-2).

coll- * : to say; to mention (2-4); to dictate, to command.*

taṭu : to hinder, to stop, obstruct (1-19).

tīr * : to settle (2-47); to fulfil * (11-16).

ńaṭ- : to plant (2-2).

ńaṭatt- : to cause to go (2-7).

ńeṟutt- (_ńiṟutt-_) : to weigh (2-52).

* _ńīrōṭṭikkoṭu_ : to give as absolute possession (13-11).

ńiveti-kk- : to dedicate, offer oblations to a deity (3-6). (< Skt. _ni-vid._)

* _paṅkucey_ : to support or assist (4-50).

* _paṭ-_ : to suffer (5-18).

* _payar_ (?) : to resume; (to confiscate ?) (12-4).

paṟai : to say (9-2).

* _pāṭutāṅk-_ : to support (13-16).

* _pāṭṭamāḷ-_ : to hold tenancy (12-5).

piṭi-kk- : to bear, carry, support (6-21).

piḷai-kk- : to break, as an arrangement (5-22).

* _piṉoṉṟucey_ : to alter (13-14).

peṟ- : to get, obtain, secure, possess (1-11).

piratiṭṭaicey : to establish a deity, as in a temple (13-6).

putukk- : to renew (4-35).

mēy : to thatch, as with leaves (1-9).

vāḻ- : to rule, to govern (1-3).

vilaiyiṭ- : to estimate the value of (2-33).

viṭ- : to let out, give out (2-32).

virōti-kk- : to oppose (6-92; < Skt. _virōdha_).

vilakk-	: to prevent (9-2).
vēṇṭ-	: to request (12-6).
vai	: to fix, determine (2-10); to set up (3-7).
rakṣiccukoṭu	: to protect (13-12, < Skt. *rakṣ-*).

11th Century

Intransitives:

* *amai*	: to be settled or fixed up (7-3).
āk-	: to be (8-4).
* *āṟṟ-*	: to be possible (8-6).
iraṭṭikk-	: to double (8-1).
iru	: to sit (3-4).
il	: base of the neg. verb *illai* 'no' (3-4).
uḷ	: to be (3-3).
* *uḷḷoṭuṅk-*	: to be included (7-1).
ēṟ-	: to exceed (7-2).
oṭṭ- *	: to be suitable, appropriate (8-4).
oḻi	: to remain behind; to avoid (8-5).
ōy	: to cease; to come to an end (7-3).
kuṟai	: to become less (8-5).
kūṭ-	: to join together (1-2).
cāñticey	: to perform the worship in a temple (1-5).
cel	: to go (1-5). (Used as an auxiliary to denote habitual action; 8-5).
* *taṇṭappaṭ-*	: to be fined (1-4).
tiri	: to turn (8-3).
ṅil	: to stand; to remain (8-1).
* *puk-*	: to enter (8-5).
* *puḷḷippaṭ-*	: to be marked absent (?) (7-2).
puṟappaṭ-	: to start (8-3).
paṇicey	: to work (1-2).
paḷḷikoḷ	: to sleep (used with reference to a deity).
muṭṭ-	: to be hindered (2-4).
varu	: to come (3-4).

Transitives and causatival-transitives:

* *amai-kk-* (*ama-kk-*)	: to institute, ordain (3-3).
* *aṭṭ-*	: to endow (2-3).
* *aṭṭikkuṭu*	: to give as absolute possession (6-11).

aruḷ-	: to command, to grant, bestow (5-5). (Used as honorific auxiliary, 5-7).
aruḷiccey	: to be pleased to say (3-4).
aḷavukoṭu	: to measure out (8-3).
aṟi	: to know (5-20).
ākk-	: to make
āṭṭ-	: to pour (oil, etc.) over an idol (2-4).
* *iṭ-*	: to give, pay (as fine) (7-2).
* *iṟu*	: to pay, as a tax (5-14).
* *uruvati-kk-*	: to approach for help ? (7-3).
uḻu	: to plough (1-3).
eṭu	: to take (6-28).
eḻut-	: to write (1-6).
* *oṟṟikoḷ*	: to take as mortgage (1-3).
* *oṟṟivai*	: to mortgage (7-3).
kaḷ	: to rob (7-1).
kavar- *	to take by force (8-5).
kāṇ *	: to supervise (1-5).
kēḷ	: to hear (5-28).
koṭu	: to give (6-6).
koṭṭ-	: to beat, as a drum (7-2).
koṇṭuvā	: to bring (6-3).
koḷ	: to buy (2-6). (Used also as an auxiliary).
kāṭṭ-	: to show (3-5).
* *kārāṇmaicey*	: to hold tenancy (8-5).
cey	: to do (2-5).
celutt- *	: to expand; to pay, deliver (8-4).
coll	: to say (7-1).
taru	: to give (8-5).
tīr	: to settle (7-3).
* *paṭ-*	: to suffer (1-4).
paṟai	: to say (6-19).
paṟṟi-kk-	: to stick (4-2).
* *pāṭutāṅk-* (—*ṅṅ*)	: to support (1-4).
peṟu *	: to get, obtain (5-14).
muṭṭi-kk-	: to obstruct, hinder (2-4).
vāḻ-	: to rule, govern over (1-1).
viṭ-	: to leave
vilakk-	: to prevent (1-5).
viṟōti-kk-	: to object (8-4, < Skt. *virōdha*); to oppose.
vīṭṭ-	: to remove (7-3).
vil	: to sell (8-1).
vai	: to place (8-4).

12th Century

Intransitives :

akappaṭ-		to be included (6-7).
atikari-kk-	:	to exercise authority (5-39).
amai	:	to be attached, connected (6-1).
aruṭ- *	:	to be impossible (5-5).
āk-	:	to become (2-15).
* *ārāḷccapaṇṇ-*	:	to conduct enquiry (6-7).
il	:	base of the neg. verb 'illai' (5-255).
iru	:	to be seated (1-15); to be (5-255).
* *iṭaippaṭ* (*iṭaṅil*)		to stand in between (5-22; 143).
uṇaṅṅ-	:	to become dried (3-2).
uḷ (*oḷ*)	:	to be; to have (1-41).
eḻuṅṅaruḷ-	:	to go forth (5-3).
okk-	:	to be agreeable (2-104).
kaḻi	:	to be over (5-253).
* *kāriyañcey*	:	to work (in a managing capacity (2-104).
kiṭa	:	to lie down (4-14).
kuṭi (*y*) *iru*	:	to live in (5-233).
kūṭ-	:	to meet together (2-35).
* *kuṟaiṅōkk-*	:	to supervise ? (5-254).
cel	:	to go (2-9); to appertain (2-79).
cāṅticey	:	to officiate as temple priest (4-28). (< Skt. *śānti*).
jīrṇṇi-kk-	:	to decay, rot (5-4, < Skt. *jīrṇ-*).
* *taṇṭikkoḷ*	:	to suffer punishment (8-29).
* *tiruvuḷḷampaṇṇ-*	:	to be graciously pleased (1-27).
tōṉṟ *	:	to appear; to come into existence (2-3).
ṅil	:	to stand (3-1).
* *paṭ-*	:	to fall or be included in (4-15).
paṇicey	:	to work (6-2).
paḷḷikoḷ	:	to sleep (3-1).
piṟa	:	to be born (5-178).
* *puk-*	:	to enter (2-7).
pō (*k*)	:	to go (5-281, used as an auxiliary to denote customary action).
muṭṭ-	:	to be obstructed (2-62).
vā (*varu*)	:	to come (1-11). (Used as auxiliary, 8-38).
vēṇṭ-	:	to be necessary (6-5).

Transitives and causatival-transitives:

atikari-kk-	:	to exceed (7-27).
aṭi	:	to cleanse by beating; to sweep (5-78).

* *aṭṭ-*	: to bestow (5-276).
amitucey	: to feed (5-56; used with reference to Brahmins).
* *amai-kk-*	: to institute, ordain (1-28).
aruḷ-	: (1-23) used as an auxiliary implying respect or reverence).
aruḷiccey	: to state (5-5; used in an honorific sense).
aṟi	: to know (6-8).
āṭ-	: to rub, besmear oil, sandal paste, etc., over an idol (5-34).
āṟāṭṭ-	: to bathe a deity in a river or a tank at the termination of a festival (5-56).
* *uṟutt-*	: to inform (1-53).
eṭu-kk-	: to take (7-20).
eḻut-	: to write (1-67).
oḻi	: to leave off; to give up (1-62).
* *kaṅṅāṇi-kk* (*kaṇkāṇi-*)	: to supervise (5-20).
kaḻuk-	: to wash (5-275).
kalppi-kk- (*kaṟpi*)	: to direct, command (5-55; 269).
* *kāṟāṇmaicey*	: to hold tenancy (2-63).
kiṭatt-	: to lay down (5-279).
kūṭṭ-	: to gather up (1-13).
koṇṭuvā	: to bring (3-2).
koṭu	: to take (1-67).
koṭṭ-	: to beat, as drum (3-11).
koḷ	: to take; to receive (1-37). (Used also as an auxiliary).
koḷutt-	: to light, as a lamp (5-276).
kaikkoḷ	: to receive (4-23).
celaviṭ-	: to expend (2-87).
* *celutt-*	: to pay, deliver; to expend (4-32).
cey	: to do (5-3). (Used as auxiliary, 8-12).
cāṭt-	: to put on, adorn (5-194); used in reference to idol).
taṭu	: to obstruct (8-28).
* *taṭuttuvilakk-*	: to prevent by obstructing (8-28).
tā (taru)	: to give (5-5). (Used as auxiliary, 8-25).
tīr	: to settle (2-47).
* *tuyar*	: to follow, pursue (5-256).
ṅanai	: to wet (1-23).
ṅāṭṭ-	: to set up, install (1-67).
ṅīkk-	: to remove, exclude (6-3).
ṅōkk-	: to regard, pay attention to (5-252).

pan̲n̲- : to do (1-26; used as auxiliary).
par̲ai : to speak (5-263).
pir̲aññutīr-kk- : to settle by mediation (5-263).
piṭi-kk- : to hold (5-38).
* piracattipan̲n̲- : to publish (5-5).
pūṭṭ-* : to put on, as ornaments (5-277).
pār-kk (< pakar- ?) : to copy (5-5).
pōkk- : to cause to go (5-278).
vāḷ- : to rule (over a territory).
viṭṭukoṭu : to assign (6-3).
vilakk- : to prevent (8-28).
veṭṭ- : to engrave (4-11).
vēṇṭ- : to buy, purchase (?) (5-273).
vai : to cook (8-38).

Intransitives:

aṭu-kk- : to be next or near (1-11).
* atikārañcey : to exercise power (4-8).
* ama : to belong (5-2).
āk- : to be (5-10).
* āḷ- : to rule (3-2).
* iṭaippaṭ- : to be in between (4-4).
iru : to be (4-7).
oḷ : to be (1-7).
kūṭ- : to join (1-3).
cel : to go (1-12).
ṅil : to stand (2-1).
* paṭ- : to occur, to be (4-4; used as help verb).
muṭṭ- : to fail (1-11).
mū-kk- : to become old (4-8).
vā (varu)[2] : to come (1-10; used as auxiliary to denote habitual action).

2. It may be noted here that the verbs *taru* and *varu*, *kotu* and *cel* were, by the Middle Tamil period, used in Tamil in reference to all persons without regard to the distinction which existed in the *Tolkāppiyam* period, viz., that *taru* and *varu* were used only with the first and second persons, while *kotu* and *cel* were used invariably with the third person. With the materials in the inscriptions, it is not possible to say whether Early Old Malayāḷam observed this distinction or no. It is not clear what exactly L. V. Ramaswami Aiyar means when he says: "Malayāḷam still preserves the *Tolkāppiyam* usage, in both the literary and the colloquial dialects: *taru* and *varu* are used only with the first and second persons, and *kōtu* and *cel* invariably with the third person." See L. V. Ramaswami Aiyar, "Indigenous Tamil Grammars on the Verbs 'Come' and 'Give'." *JAOS* 67. 215. Cf. also M. B. Emeneau, "The Dravidian Verbs 'Come' and 'Give'." *Language* 21. 184 ff.

Transitives and causatival-transitives:

aruḷ-	:	(4-5; used as honorific auxiliary).
āṭ-	:	to rub, besmear, oil, etc. on an idol (4-16).
* *iṭ-*	:	to give (1-9).
eṭu	:	to take (5-7).
eḻut-	:	to write (5-4).
oḻi	:	to exclude (4-5).
kalppi-kk-	:	to direct, command (5-4).
kaṭṭ-	:	to tie, as a garland (2-2).
koṭu	:	to give (2-3). (Used as auxiliary 1-12).
koḷ	:	to obtain (1-11). (Used as auxiliary, 5-6).
kaikkoḷ	:	to receive (5-6).
* *camai*	:	to create; to institute (5-7).
cārtt-	:	to adorn, as an idol (1-10).
cey	:	to do (4-1).
* *celutt-*	:	to pay, to deliver (5-6).
taṭu-kk-	:	to prevent (1-11).
tīrttukoṭu	:	to settle (1-12).
paṇicey	:	to make, to construct (4-5).
* *pāṭṭamāḷ*	:	to hold tenancy (1-6).
piratiṭṭaipaṇṇ-	:	to instal a deity in a temple (3-3).
muṭikk-	:	to complete (4-15).
* *vilaikkoḷ*	:	to purchase (5-6).
vāḻ-	:	to rule (3-3).
vai	:	to keep (3-3). (Used as auxiliary, 1-11).

CHAPTER VII

Adverbs

As Caldwell has pointed out (*CGD*, p. 441), there are, properly speaking, no adverbs in the Dravidian languages. " Every word that it used as an adverb in the Dravidian languages is either a noun, declinable or indeclinable, or a verbal theme, or the infinitive or gerund of a verb ". The following forms occurring in the inscriptions function as adverbs, and these may be classified as adverbs of time, manner, and place.

Syntactically the adverb occupies the following positions:—

1. The adverb generally precedes the verb or participle it modifies: *aṉṟaṉṟu paṭum-ulku añcuvaṇṇamum maṇikkirāmamum ilakkiccu vaippatākavum.*

2. The adverbial expression follows the verb or participle it modifies when emphasis is intended: *āṭṭaikkōḷ namakkāramum māpāratamuṅ tiruvuḷḷam paṇṇi-y-aruḷiyār amaiccuḷḷurutiy Kulaicēkara kōyilatikārikaḷ.*

I. Adverbs of time:

10th: *muṉṉam*, 'previously' (1-11; < *muṉ*, n. 'that which is first'), *aṉṟaṉṟu*, 'daily' (2-34; < *aṉṟu*, n. 'that day'), *mun*, 'before' (3-5), *ṅiyati*, 'daily' (5-2; < *niyati*, n.), *piṉṉai*, 'afterwards, subsequently' (6-42; < *piṉ*, n. 'back part, rear'), *akamē*, 'before' (10-4; < *akam*, n. 'inside), *ṅic*(c)*al*, 'daily' (11-5; < Pkt. *niccam* < Skt. nitya), muṉṉai, 'before' (10-6), *āṇṭuvarai*, 'annually' (13-10; < *āṇṭu*, n. year), *āṭṭu*, 'yearly' (12-6; < *āṇṭu*).

11th: *āṇṭuvarai* (2-2), *muṉṉē* (2-2), *aḷavu*, 'until, so far' (5-19; < n. 'measure'), *ṅiyatam*, 'daily' (6-4), *āṭṭāṇṭum*, 'annually (8-1), *ṅiyati* (8-2), *āṇṭāṇṭum* (8-5).

12th: *ṅiyatam*, 'always, invariably' (2-27), *āṭṭai* (2-105), *tiṅkaḷvāram*, 'monthly' (4-29; < *tiṅkaḷ*, 'month'), *āṇṭuvarai*, (5-5), *ācandratāraval*, 'perpetually, as long as the sun and the moon last' (5-10; < Skt. *ācandratāram*), *ṅiyati* (7-8), *piṉṉai* (8-29), *ṅiyatippaṭi* (3-1).

13th: *ṅiccal* (1-6), *āṇṭuvarai* (1-8), *ṅiyatam* (5-3), *aṟutiṅkaḷvāram*, 'six-monthly' (5-9), *piṟpākam*, 'afterwards' (5-10; < *piṉ* + pākam 'portion'), *ācandratāraval* (5-10).

II. Adverbs of manner:

10th: *ipparitu*, 'thus, in this manner' (1-23); (< *i* + *paritu*, n. 'manner'), *kūṭa*, 'with, together with' (2-32; inf. of *kūṭ-*, 'to join'), *kūṭṭiyē*, 'together with' (2-34), *avirōtattāl*, 'unanimously' (3-1; < Skt. *avirodha*, n.), *vevveṟu*, 'differently, separately' (5-23; < *vēṟu*, n. 'other, that which is different'), *ipparicēy*, 'thus' (8-4), *vevveṟṟuvakai*, 'separately' (13-15).
11th: *avirōtattāl* (7-1), *tekiya*, 'throughout' (7-2, < *tek-*, v. 'to be full'), *ivvaṇṇam*, 'thus, in this manner' (7-2; < *i* + *vaṇṇam*, n. 'way, manner'), *aṭuttu*, 'closely' (7-2; < p.p. of *aṭu-* 'to come close together').
12th: *ippaṭi*, 'in this manner' (2-84, *i* + *paṭi*, n. 'manner, mode') *palavakai*, 'differently, by different ways' (5-12/15; < *pala*, 'several' + *vakai*, n. 'way, means'), *ivvaṇṇam* (2-107), *immārkkam*, 'thus' (5-284); < *i* + *mārkkam*, n. 'way').
13th: *ipparicē*, 'thus' (5-8), *ivvaṇṇam*, 'thus' (5-10), *aṭuttu*, 'closely' (1-11).

Adverbial phrases expressing manner are sometimes formed from nominal forms by adding *āka* or *āy*,[1] and from nouns or relative participles by adding *vaṇṇam*, *paṭi*, and *paricu*.

āka, āy:

10th: *viṭupēṟāka* (*aṭṭikkuṭuttēn*) (1-11), *ceyyakkaṭavarāka* (2-4) *aṭṭip-pēṟāka* (.... *kuṭuttēṉ*) (2-52), *kiḻiṭāy* (.... *kuṭuttāḷ*) (13-18), etc.
11th: *āṭṭaikkōḷāka* (3-3), *avirōtamāy* (6-1), *kīḻiṭāka* (*koṭuttitu*) (6-19), *ēvaḷāy* (*kaiyyeḻuti*) (6-24), etc.
12th: *aṭṭippēṟāy* (*tirukkaiṅaṉaiccaruḷiyār*) (1-21), *aṭṭilpeṟāy* (*koṇṭār*) (1-36), *koyilāy* (*iruṅṅaruḷi*) (4-5), *orupalam āka* (5-51), *taḷiviruttiyāka* (*koḷ-ḷuṅṅel*) (5-120), *kūṭṭamā iruṅṅu* (5-252), *maṉuḷaccērāy* (6-3), *tiru-viṭaiyāṭṭamāka* (6-7), etc.

vaṇṇam:
10th: *celavupattirattil-p-paṭṭavaṇṇañ* (*-ceytukoḷḷakkaṭavar*) (2-24).
11th: *amaiññavaṇṇam* (1-5), *ākātavaṇṇam* (*irukkil*) (7-3), *viṟṟiraṭṭiccavaṇ-ṇam* (8-1).

paṭi:
10th: *Mūḻikkaḷattoḻukka-p-paṭi kaccam piḻaiccārāvatu* (9-2).
paricu:
11th: *amaiñca paricu koḷvitu* (7-2).

III. Adverbs of place:

10th: *mēl*, 'above' (*mēṟ-collappaṭṭa*, 13-17).
11th: *kīḻ* 'below' (*kīḻ amaiñña paricu*, 7-2).

1. Cf. ARDEN, *Tamil Grammar*, p. 132.

CHAPTER VIII

PARTICLES AND POSTPOSITIONS[1]

(i) *Particles serving the purpose of English Prepositions:*[2]

10th:	*ōṭu*	'with, together with'	: *muṭṭiraṭṭiyōṭu* (6-88).
	ōṭukūṭa	-do-	: *ṅīrttuḷḷiyōṭukūṭa* (2-7).
11th:	*aḷavu*	'till'	: *ulakum cantiranum uḷḷaḷavum* (5-19).
	tuṭaṅṅi	'from, beginning from'	*pañcami tuṭaṅṅi* (8-2).
	mutal	'from'	: *Kaṉṉiñāyiṟu mutal* (2-1).
12th:	*ātiyāy*	'from, beginning with'	: *viḷuvu ātiyāy* (5-259).
	iṭam	'to' or 'with'	: *nampimāriṭaṅkoṭuttu*[3] (8-15)
	iṉṟi	'unless' or 'without'	: *kuṭi iṉṟiye irukkil* (5-255). (See under conj. p. 150).
	pakkal	'with'	: *puṟappotuvāḷ pakkal* (5-278)
	mutal	'from'	: *i-vv-āṇṭu mutal* (2-76).
	mutalāy	'from, beginning with'	: *ikkālam mutalāy* (6-2).
	mēle	'on, upon'	: *Kiṭaippuṟam mēle vittiṉṉu* (5) (cf. the loc. suffix *mēl.*).
13th:	*oṭukūṭa*		: *ṅaṭaiyoṭukūṭa* (1-9).
	oḻiya	'except'	: *Kaṇṭiyūr Mahādēvar tiruvuṭampu śrīpīṭamum oḻiya śrīvimāṉamum,* etc. (4-5).
	mutal		: *i-ṅ-ṅāḷ mutal* (4-2).
	mutalāy		: *i-k-kūṟu mutalāy* (5-5).

(ii) *Adverbial particles:*

10th:	*āka*	'as'	: *viṭupēṟāka aṭṭikkuṭuttēṉ* (1-12).
	āy	'as'	: *kīḻīṭāy koṭuttāḷ* (13-9).

1. According to the old grammatical terminology, adverbs prepositions, conjunctions and interjections are treated as one class called Particles. This arrangement is more advantageous than treating these separately (cf. JESPERSEN, *Philosophy of Grammar,* p. 87). I have, however, preferred to give the title 'Particles and postpositions to more or less the same categories of speech-forms for the reason that it appears to be more clear in its meaning, implying as it does such simple elements as final *ē* used for purposes of emphasis, and complex forms like *mutalāyuḷḷa,* meaning 'and so on'.

2. Regular case suffixes are not given here.

3. According to *N,* 302, *iṭam* in this context is a locative suffix.

	uṭaṉ	'together with'	: *Srīvallapaṅkōtai-y-uṭaṉ irukka* (13-19).
	paṭi	'according to'	: *Mūḻikkaḷattoḻukka-p-paṭi* (9-2).
	vaṇṇam	'according as'	: *ceppupattirattil-p-paṭṭavaṇṇam ceytukoḷḷa-p-peṟuvar* (2-44).
11th:	*āka*		: *āṭṭaikkōḷāka koṭuppāṉ amaiññār* (3-3).
	āy		: *avirōtamāy* (6-9).
	paricu	'as, in the manner as'	: *amaiñña paricu koḷvitu* (7-2).
	vaṇṇam	'as'	: *viṟṟiraṭṭiccavaṇṇam* (8-1).
12th:	*āka*		: *taḻiviruttiyāka koḷḷuññel* (5-120).
	āy		: *kōyilāy iruññaruḷi* (4-5).
	āyi	'as'	: *caratamāyi oraṭattu koṭuttu* (8-29).
	āṟu	'as'	: *ceyyumāṟu kalppicceṭatt-*, etc. (6-7).
13th:	*āṟu*		: *ceyyumāṟu kalppicca* (5-3).

(iii) *Adjective particles:* (?)

12th:	*mutalāyuḷḷa*	'and so on'	: *mutalāyoḷḷa cāmantar* (2-52).
	mikkoḷḷa	'remaining'	: *mikkoḷḷa eppērppaṭṭatum* (5-39).

(iv) *Conjunctive particles:*

10th: *-um* 'and'

(a) Connecting nouns: *palippuṟam ñivedyamum, tuṭaiyum ñantāviḷakkum cāntiyum agramum paliyum ivvāṟiṉukkum amaitta pūmi* (4-44 to 47).

(b) Connecting verbal participles: *kārāṇmai koṭukkavum pāṭṭamiṭavum kaikkūli koḷḷavēṇṭum eṉṉavum peṟār* (6-81 to 85).

(c) Connecting clauses: *kiḻakku ciṟuvātilkkāl matilēyellaiyākavum, vaṭakku Tōraṇattōṭṭamē-y-ellai-y-ākavum, vaṭakiḻakku-p-Puṉṉaittalai Aṇṭilaṉ tōṭṭamē-y-ellai-y-ākavum i-ñ-ñāṉkellaikkum akappaṭṭa bhūmi*, etc. (2-12 to 15).

āka ... āka 'either . . or':
ūrāḷarāka iṭaiyiṭarāka 'either the *ūrāḷar* or the *iṭaiyiṭar* (13-14).

an̲r̲i 'unless' (the conjunctive particle of *al*):
tan̲ṭam koṭuttan̲r̲i 'unless the fine is paid' (4-52).

11th: -*um*: (See 1-2, 5-7, etc.).

12th: -*um*: (See 1-11, 2-35, 2-44, etc.).
in̲r̲i 'if without': *kuṭi in̲r̲iye irukkil'* 'if (it is) without inhabitants' (5-255).

13th: -*um*: (See 2-2, etc.).
The practice of sometimes writing *u* (as in *iṭaivakaiyu pirakitiyum*, 11: 6-9) where usually -*um* is written may be purely a scribal peculiarity.
The conjunctive particle -*um* is sometimes added only to the last of a series of forms which are intended to be connected.

(v) *Miscellaneous particles*:

10th: *ām*: The particles *ām* is suffixed to numerals to form ordinals; eg. *ńūr̲r̲u-ńārpatton̲patām*; '149th' (13-1).
āvatu: The neuter participial noun of *āk-* is used as a particle meaning that explanation follows. E.g. *Ayyan̲aṭikaṭiruvaṭi kuṭutta viṭu-pēr̲āvatu* (1-6).
āvan̲a: (Pl. of *āvatu*) *amaitta pūmi-y-āvan̲a* (4-35).
āvō: (< *āvatu* or *āvan̲a*) *amaicca celav-āvō* (12-2) (cf. *EMM*, p. 83).
um: The particle -*um* is put to different uses:
(a) -*um* as a conjunctive particle (see p. 149 above).
(b) -*um* in the sense of 'also': e.g. *Vilkula Cuńtaran̲ukkum okkum* (1-27) 'Agreeable to *Vilkula Cuńtaran̲* also'; *ūṭṭum aṭakkaṭavar* (3-4) 'They are bound to do the feeding also'.
(c) -*um* in the sense of 'entire': *mukkalam patin̲oru tūn̲ippā-ṭum oru viḷakkin̲ukku* (4-13), *ittan̲ai-ilum* (6-61).
kūṭa: The infinitive *kūṭa* is used in the sense of 'also': *mutaluńkūṭa kaikkon̲ṭu* (5-6).
tōr̲um: Used as a distributive suffix: *Karkaṭakañāyir̲u tōr̲um* (12-2).

11th: *āyin̲a*: *āyin̲a* the past participle of *āk-* is used as a particle denoting apposition: *Kuñcikuṭṭavarman̲-āyin̲a aṭikaḷ* (6-6).
āvitu: *ceyta kaccam āvitu* (1-2), *pirasāticcaruḷiya pirasātam āvitu* (5-6).
um: -*um* in the sense of 'also': *ar̲ukaḷaiñu pon̲n̲um tan̲ṭappaṭuvitu* 'shall pay also a fine of. . . .' (2-5).
ceytu: the past participle of *cey* is used as a particle to indicate a customary quantity: *iruńāḻi-c-ceytu* (7-2) (at the rate of *iru-ńāḻi*).
mar̲r̲um: 'besides': *mar̲r̲um ńakarattil kuṭikaḷ kōyilkku ir̲ukkumatu*, etc., (5-13).

12th: *āka:* (a) Used as a distributive particle: *tiṅkaḷ oru palam-āka* (5-51).
(b) Used as a loose postposition to a neuter participial noun to form indirect speech: *koṭuppitākavum karpiccu* (5-284).

āyiṉa: *Irāmar-tiruvaṭi kōyilatikārikaḷ-āyiṉa Srī-Kulacēkara-c-cakkira-varttikaḷ* (2-14).

āvatu (*āvitu*): *tirukkaiṅaṉaiccaruḷi-y-āvitu* (2-60), *eḻutiya piracatti āvatu* (5-6).

um: (a) as a particle expressing totality: *mūṉṟiṉṉum* (7-16), *iraṇṭūr kuṭi pati* (1-55).
(b) *-um* meaning 'also': *celavum muṭṭāte celuttuvitu* (6-6), *Kaṇṭaṉ-kaṇṭaṉum aṟiyum* (6-8), *tiruppaṟikalamum eṭuttukoṇṭu* (7-20).

eṉṟu: The past adverbial participle *eṉṟu* is used as a loose postposition to introduce a quotation: ......*eṉṟu kal eḷuti* (1-63), *kuṭiṅōk-kuka eṉṟu* (5-252), *kalliluñcempilum veṭṭiccukoḷka eṉṉu* (6-4).

kūṭa: 'also': *eppērppaṭṭatum kūṭa atikariccukoṇṭu* (6-4).

ceytu: *-ceytu* is sometimes reduced to *-ccai*, *-cca* or *-cce*. (Cf. the modern colloquial *-śśa* and *-śśe*): *ōrō paṟai-c-ceytu* (2-28), *muṉ-ṉāḷicce* (4-27), *uricce* (4-25), *aññāḷiccai* (4-27), *iruṅāḷicca* (5-40), *iruṅāḷi-c-ceyt-ari* (8-12).

toṟum: used as a distributive particle; e.g. *Utramtōṟum kaṇamaṭuvāṉ* (5-179).

pōḷ: *pōḷ* (< *poḷutu*) and *āṟu* are particles which are combined with future relative participles to give them specialised syntactic meanings; e.g., *pōḷ* to denote 'time' as in *ārāṭṭumpōḷ tiruvamir-tiṉṉu* (5-56), *āṟu* to denote 'effect' as in *cellumāṟu* (6-7). (See under relative participles.)

mēṟpaṭi: 'above-mentioned'. This is expressed by a symbol and appears profusely in No. 5.

13th: *āvitu:* *ceyta aṭṭilpeṟṟōlaikkaraṇam-āvitu* (2-1).
āṟu: *cellumāṟu* (5-3).

(vi) *Emphatic particle:*

The particle *ē* is met with as an emphatic suffix in all the centuries: (*ē* sometimes appears as *ēy* — see under Phonology).

10th: *paḷḷiyārēy* (1-20), *vayalkkāṭē* (2-11), *ittaṇṭamē* (9-2).
11th: *ittaṇṭamē* (1-5), *ūrāḷarē* (7-3).
12th: *immārkkamē* (5-250), *akamē* (5-264).
13th: *ivvaṇṇamē* (5-10).

(vii) *Honorific particles.*

1. Prefixes: *tiru, śrī* (*ciri*).

tiru: (a) Prefixed to names of temples and to things connected with temples: Examples:—

10th: *tirukkuḷam* (4-64), *tiru-k-kōyil* (5-17), *tiru-c-cantaṉam* (6-15), *tiru-viḷakku* (8-1), *tiru-v-amirutu* (10-3), *tiru-k-Kaṇṭiyūr* (7-1).

11th: *tiru-k-kōyiluṭaiyār* (1-3), *tiru-p-palikku* (7-2).

12th: *tiru-k-kūttu* (2-78), *tiru-ñantāvaṉam* (4-4), *tiru-maṭai* (4-31), *tiru-mēṉi* (5-106).

13th: *tiru-v-amirtiṉṉu* (1-3), *tiru-māla* (1-10), *tiru-k-Kāṇṭiyūr* (4-1).

(b) Prefixed to the terms referring to royal personages and to the honorific suffixes *aṭi* and *aṭikaḷ*: Examples—

10th: *paṭṭārakar tiruvaṭikku* (12-4).

11th: *tiru-v-uḷḷam* (7-1), *kō-śrī Pārkkaraṉ-Iravivarmaṉ-tiru-v-aṭikku* (5-2).

12th: *tiru-v-irācciyam* (2-5), *tiru-v-uḷḷam* (1-26).

13th: *tiru-Vēṇāṭṭaṭikaḷ* (1-3).

2. Suffixes: *aṭi, aṭikaḷ, tēvar, tēvi, amirtu* (*amitu*), *aruḷ.*

aṭi, aṭikaḷ, tēvar: suffixed to the names of gods and distinguished personages. Examples:—

10th: *Perumāṉaṭikaṭkku* (6-51), *Ayyaṉatikaṭiruvaṭi* (1-3).

11th: *Pārkkaraṉ-Iravivarmaṉ-tiruvaṭi* (5-2).

12th: *Irāmar-tiruvaṭi* (2-13).

13th: *Vēṇāṭṭaṭikaḷ* (1-3).

10th: *Viyarāka-tēvar* (2-25).

tēvi (< dēvi): Used when referring to a royal lady:

12th: *tāyār-tēviyār* (5-3).

amirtu (*amitu*): The form *amirtu* (*amitu*) (< *amṛta*) is used as an honorific suffix when referring to the food-offerings to gods: Examples—

11th: *aṭaikkāyamitu* (8-5).

12th: *ñeyyamirtu* (5-40).

aruḷ: The verb-base *aruḷ-* is used as an honorific auxiliary when referring to the actions of distinguished personages. Examples—

11th: *iruntaruḷiya ñāḷ* (5-5).

12th: *ñaṉaiccaruḷa* (2-42).

13th: *vāḻntaruḷa* (3-3), *muṭiccaruḷiya* (4-5), *ceyviccaruḷi* (4-8).

(viii) *Augments.*

The following particles are used as inflexional augments:—*-iṉ-*, *-ṟṟ-* (*-iṟṟ-*), and *-tt-*.

-iṉ- (i) *-iṉ-* is used before the instrumental *āl* of a neuter noun: *ilēkai-y-iṉ-āl* (11: 6-14).

(ii) It is always used after the instrumental *-āl* of numerals; exs. *iraṇṭiṉāl* (12: 3-1), *irupattumūṉṟiṉāl* (12: 5-24).

(iii) Before the dative *-u-kku* of neuter bases it usually appears; exs. *viḷakk-iṉ-ukku* (10: 4-13), *ivvāṟiṉukku* (10: 4-6), *celav-iṉ-ukku* (10: 9-2), *ṅivedyatt-iṉ-ukku* (10: 4-10), *akkira-tt-iṉ-ukku* (10: 4-28), *tiruvamirt-iṉ-ukku* (11: 6-10), *celav-iṉ-ukku* (11: 6-19).

(iv) For the permanent embodiment of the augment in the dative suffixes *-iṉu* and *-iṉṉu,* see Chapter II.

(v) It is used with the force of a genitive suffix, generally after neuter bases; exs. *tiruviḷakkiṉ eṇṇāi* (10: 5-7), *Pulikkōṭṭiṉ paṭakāram* (12: 5-253).

(vi) It is used before the locative *-il* of the neuter pronouns; exs. *itiṉil* (10: 6-92), *ivaiyiṟṟiṉil* (10: 5-12).

(vii) Before the loc. *-uḷ* in one instance the augment is met with: *akatt-iṉ-uḷ* (12: 5-83).

(viii) Before the loc. *-mēl* of neuter nouns ending in *-u, -am,* and *-l,* *-iṉ-* is invariably used; exs. *Neṭuṅṅōṭṭiṉmēl* (12: 5-105), *kala-tt-iṉ-mēl* (11: 8-1), *kal-l-iṉ-mēl* (11: 3-4).

-ṟṟ- (-iṟṟ-):

The iṉflexional augment -ṟṟ- (-iṟṟ-) is usually embodied in the case of the neuter plural pronouns *avai* and *ivai;* exs. *avaṟṟai* (12: 5-779), *avaṟṟiṟku* (12: 2-124), *ivai-y-iṟṟ-āl* (10: 5-7), *ivai-y-iṟṟ-il* (10: 5-12), *iva-ṟṟ-al* (12-5: 256), *iviṟṟiṉṉu* (12: 5-54).

-tt-:

The neuter nouns ending in *-am* always take this augment before the case suffixes; exs. *Kaṇavatiyaraiyaṭattāl* (10: 5-10), *kala-tt-āl* (12: 2-88), *pāṭṭa-tt-āl* (12: 5-17), *rakṣāpōkattāl* (12: 5-31), *tōṭṭa-tt-āl* (12: 5-46), *ceppupattira-tt-il* (10: 1-21), *atikāra-tt-il* (10: 7-6), *aka-tt-il* (10: 10-3), *Koll-tt-u* (10: 2-33).

(ix) *Expletives.*

Some of the suffixes mentioned above are sometimes used as mere expletives. Examples:—

10th:	*āyi*	:	*Eśō dā Tapir-āyi ceyvitta* (1-5).
	ceytu	:	*ṅāṉāḷi-c-ceyt-ari* (13-9).
	pāṭu	:	*tūṇippāṭu* (4-7).
	ē	:	*ṅāṟ-kalaṉē ṅāṟṟūṇippāṭum* (4-22).
11th:	*iṉ*	:	*eṇpatiṉ kalaṅṅel* (3-3).
12th:	*iṉ*	:	*ṅālppatiṉ kalaṅṅel* (1-18).
	ē	:	*kalaṉē* (4-26).
	eṭam	:	*kalppicceṭatt-aṟiyum tāḷkki* (6-8).
	ccai	:	*paṟaiccai* (5-283).

CHAPTER IX

SYNTAX

While the Old Malayāḷam prose texts show a tendency to force Dravidian syntax into the Sanskritic mould,[1] the inscriptions appear to approximate more to the general rules of the colloquial speech. There are, however, sentences of the 'nominal' type and passive constructions which may not have been colloquial; also, the rare instances of number and case concords appear to be the result of a desire to imitate Sanskrit syntax.

The normal sentence-type in the inscriptions is actor-action, the usual word-order being subject-object-verb.[2] In a normal sentence the adverbial expression, if any, indicating the time of an action is placed first; the indirect object is placed before the subject, the subject precedes the direct object; and the object precedes the verb which comes at the end. Attributes and substantives in apposition precede the substantival forms they refer to, and subordinate clauses, including adverbial absolutes, are placed before the main clause containing the finite verb. (Cf. 10: 8-1; 11-18).

There are many deviations from this general word-order which may have been due to the stress placed by a speaker on a particular part of the sentence.[3]

1. See L. V. R. AIYAR: "A Fifteenth Century Malayāḷam Prose Text". *The Maharaja's College Magazine* (Ernakulam), 21, No. 1 (Sept. 1938).

2. Word order alone is dealt with here under the heading 'Syntax', since the purpose of the present study is only to analyse the grammatical structure of the earliest phase of the Malayāḷam language (*vide* Introduction). It may, however, be noted here that word order is only a part of syntax even from the narrow point of view of linguistics, not to speak of the other points of view with reference to the wider problem of logical syntax [cf. CARNAP, *The Logical Syntax of Language* (London, Kegan Paul, Trench, Trubner and Co. Ltd. (1937); see especially pp. 76-82); cf. also Otto JESPERSEN, *Analytic Syntax* (Copenhagen, 1937)], in precisely the same manner as semantics is more comprehensive than merely linguistic meaning [cf. CARNAP, "Foundations of logic and Mathematics", *International Encyclopaedia of Unified Science*, Vol. I, No. 3 (The University of Chicago Press, Illinois), pp. 3-5 and 6-8, especially p. 8; and L. BLOOMFIELD, "Linguistic Aspects of Science", *International Encyclopaedia of Unified Science*, Vol. I, No. 4, pp. 17-19].

3. It may be pointed out here that the problem of the intonational pattern in Malayāḷam has to be investigated in detail in the manner in which PIKE has investigated the problem for English (cf. Kenneth L. PIKE, *The Intonation of American English*; University of Michigan Publications in Linguistics, Vol. I (1946).

Since no marked change in syntax is observable in the later inscriptions as compared with the earlier (except perhaps the influence of Sanskrit syntax in the twelfth century instance of *Kar̲kaṭakattil Viyāḷattil*), only a few illustrations selected at random are given here.

1. *Nominative substantive expression functioning as actor*[4] *(or subject)*:—

A. Subject preceding the object and the finite verb expression (or the normal type of sentence: (a) With verb (transitive or intransitive):

(i) *tīyamāḷvāṉum matiṉāyakaṉum maṟṟum-m-evvakaippaṭṭārum-m-eppiḷai colliyum-m-ivakaḷai-t-taṭumāṟa-p-peṟār*, 'The *tīyamāḷvāṉ* and the *matil-ñāyaṉ* and whatever sort of other people should not, by imputing (to them) any kind of motives, cause any disturbance to them.' (10: 1-17/19).

(ii) ...... *Kēcavaṉ palikkal paṟṟiccu ñāḷi ari amaccu*, 'Kēśavaṉ fixed the *balikkal* and gave one *ñāḷi* of rice' (11: 4-2).

(iii) *i-vv-Īḻavar tam vaṇṭi kuṇañt-añkāṭiyilum matililum viyāparikka-k-kaṭavar*, 'These Īḻavas are permitted to go about their duties (i.e., to ply their trade) in the market and within the (fort) walls, bringing their carts with them' (10: 1-15).

(b) Without verb:

(i) *kō-t-Tāṇu-Iravikku cellāñinṟa yāṇṭu patiṉēlu*, 'The year that is current (in the reign) of king Tāṇi-Iravi (is) seventeen' (10: 3-1).

(ii) *tamperumāṭṭiyār amaicca ñañtāviḷakk-oṉṟu*, 'The perpetual lamp given by the queen (is) one (i.e., the queen gave one perpetual lamp)' (10: 11-7).

(iii) *āka ñel ñāṟpatu paṟa*, 'In total, the paddy (is) forty *paṟas*' (12: 5-106).

B. Subject coming at the end of the sentence:

(i) *i-p-paritu viṭupēṟu aṭṭippēṟāka Ayyaṉaṭikaṭiruvaṭiyāl Tarisāppaḷ-ḷikku aṭṭuvittukkuṭuttāṉ Maruvāṉ Sapīr-Iśō*, 'Maruvāṉ Sapīr-Iśō caused the *viṭupēṟu* containing these conditions to be given to the Tarisāppaḷḷi as an *aṭṭippēṟu* by Ayyaṉaṭikaḷ tiruvaṭi' (10: 23-25).

(ii) *i-ñ-ñel porākkāl kuṟaiññatiṭṭu celutta-k-kaṭavar paṭāra atikāri-kaḷ*, 'If this paddy is insufficient, the *paṭāra-atikārikaḷ* should make up the deficiency and meet the expenses' (10: 11-14).

C. Subject is sometimes not expressed (when it is clear from the context):

(i) *evvakaippaṭṭa iṟaiyuñ-Tarisāppaḷḷikku .... kuṭuttēṉ* (I) gave every kind of tax to the people of Tarisāppaḷḷi' (10: 1-13-/14).

(ii) *Mūḷikkaḷattu kaccattoṭ-okkum*, '(This) agrees with the agreement of Mūḷikkaḷam' (10: 8-2).

4. Cf. Bernard Bloch and George L. Trager, *Outline of Linguistic Analysis*, p. 72 ff.

D. When the nominative substantive expression consists of a number of substantives, they are sometimes summed up by means of a pronoun:

.........*Tirukkaṭittāṉattu ūrārum paraṭaiyārum capaiyārum Naṉṟuḷaṅāṭuvāḷiṉṟa Maṇalmaṉṟatt-Iyakkañ-cirikaṇṭaṉum ivakaḷ mukkālvaṭṭatt-avirōrattāl-k-kūṭicceyta kāriyamāvatu*, 'The *ūrār* of Tirukkaṭittāṉam, the *paraṭaiyār*, the *capiyār* and *Maṇalmaṉṟatt-Iyakkañ-cirikaṇṭaṉ* — these assembling unanimously, transacted the following business' (11: 7-1).

2. *Accusative substantive expression (or direct object) and dative substantive expression (or indirect object)*:—

A. Direct object:

(a) The direct object normally comes after the subject and precedes the verb:

Iyakkaṉ-śrīkaṇṭan pañcamāśabda(m) amaiccāṉ, 'Iyakkaṉ-śrīkaṇṭaṉ instituted the *pañcamahāśabda*' (11: 7-1/2).

(b) The direct object is sometimes placed first in the sentence:
aṉṟaṉṟu paṭum-ulku añcuvaṇṇamum maṇikkirāmamum ilakkiccu vaippatākavum (10: 2-34/35) 'The añcuvaṇṇam and the maṇikkirāmam shall take care of the customs collected every day'.

(c) The direct object is placed after the indirect:
.....*prakṛtiyum aṟuṅūṟṟuvarum Puṉṉaittalai-p-patiyum uḷppaṭa vaccu i-p-pūmikk-ellai*, 'The boundary of this land was marked in the presence of the *prakṛti*, the six-hundred, the *Puṉṉaittalai pati* and the *Pūḷaikkuṭip-pati*' (10: 2-9-11).

(d) Rarely, the object is placed at the end of the sentence:
pārkkōluṅ-kappāṉum paiñcakkaṇṭiyum muṉṉam peṟṟuṭaiyaṉa ṅāṉum viṭupēṟāka aṭṭikkuṭuttēṉ-i-ṅālukuṭi Īḻavarum-m-orukuṭi vaṇṇārum, 'I, who have formerly received the *pārkkōl, kappāṉ* and *pañcakkaṇṭi*, have given these four families of Īḻavar and one family of Vaṇṇāṉ as *viṭupēṟu* by the pouring of water.' (10: 1-10-12).

(e) Object is sometimes omitted when it is clear from the context:

(i) *uvaccakaḷ eḻutitu* (11: 1-5/6). 'The drummers wrote (this).
(ii) *Paṭṭāḷi-k-Kōviṅtan-Kumaraṉum aṟiyum*, 'Kōviṅtaṉ-Kumaraṉ of Paṭṭāḷi also knows (this).'

B. Indirect object:

(a) Indirect object normally precedes the direct:
Ñāṭuvāḷumavaraṭkku aṟukaḷañu poṉṉuṅ-taṇṭappaṭuvitu, to the ṅāṭuvāḷumavar (governor of the country) 'A fine of six *kaḷaiñu* of gold shall be paid.' (11-2-5).

(b) Indirect object coming after the direct:

iccērikkāl taṉṉātikaḷkku (m) yōkikaḷkku (m) śrīvaiṣṇavarkkuṅ-kīḻīṭāka koṭuttitu, 'This *cērikkāl* was given as *kīḻīṭu* to his relations and to the *yōkikaḷ*' (11: 6-18/19).

(c) Indirect object coming at the end of the sentence where the verb *to be* is understood:

ivai mukkalam patiṉoru tūṇippāṭum oru viḷakkiṉukku (10: 4-11/13). 'These three kalams and eleven tūṇis (are) for a lamp'.

C. Substantives which stand in the relation of object to participles and participial substantives always precede the latter:

maṉai mēyppāṉ (10: 1-9), *ivai uḷuvār* (10: 4-48), *atu vilakkumavar* (11: 1-5), *tiruvuḷḷam avirōtamākki* (11: 7-1), *ippaṇi ceyvāṉ* (11: 7-2), *ṅel koṇṭuvaṅṅu* (12: 5-33), *i-c-celavu vaippāṉ* (12: 8-38), *tiruppaṇi ceyvicca* (13: 4-16).

3. *Finite verb expressions:*—

(a) In the normal sentence the finite verb comes at the end:

Kēcavaṉ palikkal paṟṟiccu ṅāḻi ari amaccu (11: 4-2).

(b) The finite verb sometimes precedes the subject:

i-p-pari aṟivēṉ Vēṇāṭuṭaiya Kōvarttaṉa Mārttāṇṭaṉ, 'Thus, I, Kōvarttana Mārttāṇṭaṉ of Vēṇāṭu, know (this)' (11: 5-20/21).

(c) The finite verb is sometimes omitted:—

veḷḷittālam-iraṇṭu, vaṭṭakai iraṇṭu (10: 7-45/46) 'Two silver plates and two dishes (have been given). *itu oru tuṭai muṭṭukil muṭṭiraṭṭi* 'If this fails once, double the quantity (shall be paid) (12: 6-6).

(d) A neuter participial noun is sometimes used with the force of finite verb:

Killiyūr Cemmutai Māmpaḷḷattiṉṉu ellai-y-āvatu. 'That which is (i.e. the following is) the boundary of Cemmutai Māmpaḷḷam' (12: 4-7/8). *Srī Vīra Irāmaṉ-Umaiyammai-y-āṉa piḷḷaiyār tiruvaṭi piratiṭṭai paṇṇiccaruḷiyatu* (13: 3-3/4), 'That which has been installed by, etc.'.

4. *The following deviations from the general word-order, viz., subject-object-verb, are noteworthy:*—

(i) Subject-verb-object:

10th: *pārkkōluṅ-kappāṉum paiñcakkaṇṭiyum muṉṉam peṟṟuṭaiyaṉa ṅāṉum viṭupērāka aṭṭikkuṭuttēṉ-i-ṅ-ṅālu kuṭi Īḻavarum-m-orukuṭi vaṇṇārum* (10: 1-10/12).

(ii) Object-subject-verb:

10th: *patiṉārkaḷañcu poṉ tēvar koḷḷa-k-kaṭavar* (4-57/58). *i-p-pūmi ñāṭuvāḷumavar payara-p-peṟār* (12-4).

11th: *aṭṭiṉa eṇṇaiyil-p-pātiyum puḷḷippaṭṭa ñellum kīḻccānti ceyyumavaṉ koḷvitu* (7-2).

12th: *Puṉṉamaṇkōṭuṅkūṭa iṭaippaṭṭa ñilam vāriyamuṭaiyavaraḷ vāḻiccukoḷvitu* (5-22). *i-k-kārāṇkūṟu .... Rākavañārāyaṇaṉ atikariccu celavu celuttuvitu* (7-26/27).

(iii) Object-verb-subject:

10th: *i-p-paritu viṭupēṟu aṭṭippēṟāka Ayyaṉaṭikaṭiruvaṭiyāl Tarīsāppaḷḷikku aṭṭuvittukkuṭuttāṉ Maruvāṉ Sapīr-Īśō* (1-23/25).

11th: *i-p-pari aṟivēṉ Vēṇāṭuṭaiya Kōvarttaṉa Mārttāṇṭaṉ* (5-20/21).

12th: *āṭṭaikkōḷ ñamakkāramum māpārātamum tiruvuḷḷam paṇṇiyaruḷiyār amaicculḷuṟuti Kulaicēkara kōyilatikārikaḷ* (1-23/30).

5. *Nominal sentences:*—

'Nominal' sentences[5] of the following types are met with:

(i) *i-t-taṇṭam-iṭṭu ūṭṭum aṭa-k-kaṭavar,* 'Even after paying this fine (they shall still be) persons who are bound to conduct the feeding' (10: 3-4).

(ii) *ulakum cantiraṉum uḷḷaḷavum añcuvaṇṇam sañtatippirakiruti.* 'So long as the world and the moon last *añcuvaṇṇam* (is their) *sañtatippirakiruti*' (11: 5-19/20).

(iii) ...... *Kaṇṭaṉ-utaiyaṉaṉ eḻuttu,* '(This is) the writing of *Kaṇṭaṉ-utaiyaṉaṉ.*'

6. *Passive Constructions:*—

The passive construction is rarely employed:

10th: *i-p-paritu viṭupēṟu aṭṭippēṟāka Ayyaṉaṭikaṭiruvaṭiyāl Tarisāppaḷḷikku aṭṭivittu-k-kuṭuttāṉ Maruvāṉ Sapīr-Īśō,* 'The *viṭupēṟu* containing these conditions was caused to be given to the Tarisāppaḷḷi as an *aṭṭippēṟu* by Ayyaṉaṭikaḷtiruvaṭi through (the efforts of) Maruvāṉ Sapīr-Īśō' (1-23/25).

11th: *ivakaḷil ākātavaṇṇam irukkil ñāṭuvāḷumavaraiyum muññūṟṟuvarum paṇiyuṭaiyavakaḷaiyum uruvaticcu avakaḷāl viṭṭiccu-k-koḷvitu,* 'Should there be any objectionable individuals among them, the governor of the country, the three hundred and the (temple) servants shall be approached and the difficulties shall be got removed by them' (7-3).

5. Cf. Gray, *Foundations of Language*, p. 228.

7. *Elliptical construction:*—

Veṭṭikkarikkāṭṭinmēluḷḷa celavu muṭṭikkumavaṉ Mūḻikkaḷa-k-kaccam, 'He who obstructs the expenses (due to be met with the income) from Veṭṭikkarikkāṭu (will be punished under the provisions of) the agreement of Mūḻikkaḷam' (10: 12-7).

8. *Participles:*—

(i) *Adverbial and Infinitive participles:*

(a) Adverbial and Infinitive participles precede the verbs they modify:

emperumāṉ kāṇa ..... *aḷavukoṭukka-k-kaṭaviyar* (10:10-3/4); ..... *Kaviyūr ūrār avirōtattāl mukkālvaṭṭattu-k-kūṭi koyilum-uḷḷirukka Maṅṅalattu Nārāyaṇaṉ-kēyavaṉ* ..... *koṭuttāṉ* (10: 9-1); *i-p-pūmi māvara-k-koṇṭu mutalaṟa aṭṭikuṭuttāṉ Kālkkaraiṅāṭuṭaiya Kaṇṇampuṟaiyaṉ* (10: 12-4).

11th: *ūrum paraṭaiyum sabhaiyum ivakaḷ tiruvuḷḷam avirōtamākki uḷḷiruṅṅu Naṉṟuḷaṅāṭu vāḻiṉṟa Manalmanṟatt-Iyakkaṉ-Śrīkaṇṭaṉ pañcamāśabdam amaccāṉ* (7-1/2).

12th: *i-t-tiruvaṇukkattuṭi Tiruvāyampāṭi uvaccaṉ Kāmaṉ-kiruṭṭaṉ taṅtati-p-piravēcame cēkoppaṇi ceytu cōṟuṅ-koṇṭu viruttiyil ṅiṉṟu varuṅ-ṅellum aḷavu koṇṭu kuṟiyuṅ-koṭuttu varuvitu* (8-34/38). *kūṭṭamā iruṅṅu* (5-252), *ṅālella akappaṭa tōraṇamuṅṅāṭṭi* (6-7).

13th: ...*tiruppaṇiyum muṭiccu tirukkalacamum āṭṭiccamaikku ivai Vikkiramaṉ-āticcaṉ eḻuttu* (4-15/16). *Śrī-Vīra-Irāmaṉ-kēraḷavarmma-tiruvaṭi Vēṇāṭu vāḻṅtaruḷa śrī-Vīra-Irāmaṉ-Umaiyammaiyāṉa piḷḷaiyār-tiruvaṭi piratiṭṭaipaṇṇiccaruḷiyatu* (3-2/4).

(b) Adverbial and Infinitive participles take objects which precede them:

10th: *kōppatavāraṅ-kōyil koṇṭu* (2-37), *poṉṉum paṭṭu* (6-54). *maṉai mēyppāṉ koḷḷum iṟai* (1-9).
11th: *tiruvuḷḷam avirōtamākki* (7-1). *i-p-paṇi ceyvāṉ* (7-2).
12th: *ṅel koṇṭuvaṅṅu* (5-33). *i-c-celavu vaippāṉ* (8-38).
13th: *mutal koṭuttu* (2-3). *Vēṇāṭu vāḻṅtaruḷa* (3-3).

(ii) Relative or Adjective participles:

These are placed immediately before the substantives they refer to. When they are transitive they take objects which precede them.

10th: *Vēṇāṭu vāḻkiṉṟa Ayyaṉaṭikaṭiruvaṭi* (1-3), *kuṭutta viṭupēṟu* (1-6), *a-k-kuṭikkēṟum īḻakkaiyar* (1-7), *(Maruvāṉ Sapīr-Iśō) ceyvicca Tarisāppaḷḷikku kuṭutta bhūmiyāvatu* (2-5/6), *piḻaikkum taḷiyār* (5-22).

11th: *iruṅtaruḷiya ñāḷ* (5-5), *ceyta kāriyam* (6-3), *āṭṭiṉa eṉṉai* (7-2), *puḷḷip-paṭṭa ñel* (7-2).
12th: *koṭutta uruḷi* (8-38), *Vēṇāṭuvāḻṅtaruḷiṉṟa śrī-Vīra-Rāmavarma-tiruvaṭi* (6-1), *amirtu ceyyum ari* (6-4).
13th: *Vēṇāṭu vāḻṅtaruḷukiṉṟa śrī-Vīra-Kēraḷavarmar* (5-1), *amaiñca atikārar* (5-2).

9. *Attributes (numerals, adjectives and nouns)*:—

(a) Preceding the substantives they qualify:
10th: *ñālu kuṭi īḻavar* (1-7), *taḷai-k-kāṇam* (1-8), *iravau cōṟu* (1-10), *Puṉ-caippaṭakārattu Cēṅtaṉ-caṅkaraṉ* (3-2), *Muruṅṅaiyūr-Tēvaṉ-pavitti-raṉ* (10: 13-21).
11th: *oru ñaṅtāviḷakku* (6-4), *irupattuñālām-āṇṭu* (1-1), *ceṅkōl* (5-3), *āṇ-makkaḷ* (5-16), *pala ñāḷ* (7-2).
12th *ñālppatiṉ kala-ñ-ñel* (1-17/18), *puttaṉ araiyāl* (2-24), *āriya brāhma-ṇar* (2-33/34), *mēlccāṅti virutti* (5-65), *ñaṟu ñey* (5-170).
13th: *peru amirtu* (1-9), *pacce paiṟu* (2-2), *Mullaiccēri-t-Tāmōtiraṅ-kōviññaṉ* (4-12), *attāḷa-t-tiruvamirtu* (5-3).

Noun in the genitive:
10th: *avakaḷ saṅtati* (4-51), *Tirumūḻikkaḷattappaṉuṭaiya śrī kāriyam* (10-2).
11th: *koṭṭikaḷuṭaiya virutti* (1-3), *Vēṇāṭuṭaiya Kōvarttaṉa-Mārttāṇṭaṉ* (1-1).
12th: *Pirāyiśvaramuṭaiya Mahādēvarkku* (4-2).
13th: *Vēṇāṭuṭaiya Kīḻappērūr* ... (4-7).

(b) Following the substantives:
10th: *īḻakkaiyar eṉmarum* (1-7), *i-p-pūmi ittaṉaiyilum* (10: 6-44), *uḷḷa ñāḷ-ellām* (1-21), *veḷḷi ñaṅtāviḷakk-oṉṟu* (11-5).
12th: *Kuḷaikkāṭṭu koḷḷum ñel patiṉaṟu parai iṭaṅkaḷiyāl aññāḻi* (5-7/8), *ñūl oru palam; veṟṟila ñūṟu; paḻukkā irupatu* (5-59/60).

(c) When a whole number and fraction function as numeral adjective, the whole number is usually placed before and the fraction after the substantive:
10th: *patiṉmuttūṇi-y-araippāṭu* (4-25).
12th: *ñel aṟupatteḻupaṟa arai* (5-184).

10. *Apposition*:—

A nominative substantive expression which is in apposition with a substantive precedes the latter:
10th: *Catiracikāmaṇi āyiṉa kiḻāyaṭikaḷ* (11-4).
11th: *Nārāyaṇaṉ Vāsutēvaṉ āyiṉa Nelkuṉṟaṭikaḷ* (6-15).
12: *Viṣṇubhaktaṉ Kaitaivāy Kaṇṭaṉ Utaiyaṉaṉ* (8-39).

11. *Adverbial expressions:*—

(a) The adverb preceding the verb or participle it modifies:

10th: *aṉṟaṉṟu paṭum ulku* (2-34), *avirōtattāl-k-kūṭi* (3-1), *avvāṇṭu* .... *ceyta kaccam* (3-1).

11th: *kōyilatikārikaḷāy vaññiruñtu* (2-4), *ñiyatam eṭuppitu* (6-28), *tekiya muṭṭukil* (7-2).

12th: *aṭṭilpēṟāy tirukkaiñaṉacc-aruḷiyār* (1-21), *āṭṭai kārāḷaru cērikkal koṭuppatu* (2-105), *tiṅkaḷvāram aḻivu koṭuttu* (4-29).

(b) Following the verb or participle:

11th: *i-t-tiruvārātaṉam pattuñāḷilum* ... *ñiyati ñūṟu ñūṟu māṉiṭattai amirtu caiyyiccu āṟāṭṭa-k-kaṭavar āṭṭāṇṭum* .... (8-2).

12th: *tiruvuḷḷam paṉṉiyaruḷiyār amaiccuḷḷuruti* (1-26/28). *kal eḻuti ñāṭṭik-koṭuttār tiruvuḷḷam paṉṉiyaruḷiya mārkkamē* (1-64/72). *tañtatipra-vēcamē ācandratāraval* (8-22).

12. *Concord:*—

Number and case concord between adjectival expressions and the substantives qualified are rarely met with in the later inscriptions.[6]

(i) *āyiravar pirāmaṇarai* (11: 8-2). (Cf. also expressions like *vaiṣṇa-vaṉ Rākava ñārāyaṇaṉ* (12: 7-21/22), *uvaccaṉ Kāmañ-kiruṭṭaṉ* (12: 8-35), etc.)

(ii) *Tiruvāṭṭāṟṟukku kiḻakkil tiruñañtāvaṉattil* (12: 4-4), *puttaṉ aṟiyāl patiṉāḻikoḷḷum paṟaiyāḷ* (12: 2-24/27), *Karkkaṭakattil Viyā-ḷattil* (12: 1-8; cf. *Karkkaṭaka-v-Viyāḷattil*, 12: 8-8).

13. *Clauses* :—

(a) Subordinate clauses generally precede the principal clause in a complex sentence:

10th: *ellām muṭṭil ēḻaraikkāṇam taṇṭappaṭuvitu* (5-15), 'If all fails, (he) should pay a fine of, etc.' (10: 5-15). *ūrār avirōtattāl-k-kūṭiyum i-c-celavu maṟṟoṉṟiṉukku celutta-p-peṟār* (9-2) 'Even if the representa-

6. For concord between actor and action and also for congruence (cf. BLOCH and TRAGER, *Outline of Linguistic Analysis*, p. 77) see under 'Verbs—The Indicative Mood'. The appearance of syntactic concord between *viśēṣaṇa* and *viśēṣya* in the 11th and 12th century inscrr. is indicative of the enormous influence of Sanskrit on Malayāḷam in the Old Mal. period. It may be noted here that such imitations of Sanskrit syntax continued to be popular in Malayāḷam till the end of the *Campu* (Old Mal.) period. The fourteenth century *Līlātilakam* (in II, 11, comm.), it is interesting to note, condemns the imitation of Sanskrit syntax in Mal. (Cf. *EMM*, pp. 119, 136; *GL*, p. 47).

tives of the people (*ūrār*) decide (lit. assemble) unanimously, they should not assign this expenditure for some other purpose'.

11th: *itu muṭṭukil muṭṭiraṭṭi aṭṭuvituñceyvatu* (2-3), 'If this fails, he who caused the failure shall pay double the due'.

12th: *iraṇṭu-ńāḷ muṭṭi mūṉṟu ńāḷ muṭṭukil sabhaiyār paṟaiññutīrttu celut-tuvitu* (5-262/263), 'If this fails for a third time after failing twice, the members of the sabha should settle the matter and meet the expenses.'

14. *Quotation*:—

A quotation is introduced by placing the past participle *eṉṟu* (*eṉṉu*) after the words quoted:

12th: *arańtai aṭikkumat-oḷiññōm-eṉṟu kal eḷuti ńāṭṭi-k-koṭuttār* (1-59/67), ''We have given up the collection of *arańtai*'—thus they caused to be engraved on stone and had it set up'.
......*kallilum cempilum veṭṭiccukoḷka eṉṉu koyiṟkuṟiyum tirumuka-mum Cēkaraṉ-kumaraṉe kaikkoṇṭu*, ''You may get this engraved on stone and copper'---(directing them) thus Cēkaraṉ-kumaraṉ obtained a royal order, etc.' (4-21). For the form *eṉṉu*, see p. 27).

Conclusions

The following are the important features of Early Old Malayāḷam (E. O. M.) as revealed by the study presented in this thesis:—

1. Early Old Malayāḷam appears to have had thirty distinct phonemic units (12 vowels and 18 consonants), as in Tamil, though the possibility of the existence of the voiced varieties of the plosives and sibilants, at least as phonemic variants, is suggested by the inscriptions studied here. (pp. 16 and 27).

2. It is only by the close of the E.O.M. period that forms with final *-a* (in the place of earlier *-ai*) begin to make their appearance in writing. (pp. 17 and 46.)

3. By the close of the E.O.M. period, forms with absolute consonantal finals (like *ńel*) become less frequent, being replaced by forms with the enunciative ə (written as *u*). (pp. 17 and 46).

4. The verbal base *paṭ-* does not appear to have been affected by the change of *a* to *e* in many speech-forms during the E.O.M. period. (p. 19).

5. *-kal,* the seventh case post-position, found in the inscriptions after the 11th century is derived from an earlier *-kāl,* which is met with in a 10th century inscription. (p. 19).

6. The long *-ā* in fruit names (as in *aṭaikkā* < *aṭaikkāy*) appears to have been preserved till the end of the E.O.M. period. (pp. 19 and 22).

7. Before consonants and pauses, the final *-u* (*kuṟṟiyalukaram* ɯ) in forms like *vaiccu* was probably opened out to ə quite early in the history of Mal. (p. 20).

8. The reduction of *ai* to *a,* one of the most important features in the evolution of Malayāḷam phonology, started in medial positions in the earliest stage of Malayāḷam and then gradually spread to final positions also by the 12th century. (p. 21).

9. The change of *ṅk* > *ṅṅ, ñc* > *ññ,* and *ńt* (*ńd*) > *ńń* by the process of nasal assimilation became well-established during the E.O.M. period. (pp. 22-26).

10. The palatalisation of *-tt-* into *-cc-* operated as a regular rule in past stems with basal front vowels or vocalic elements and in some IA loans. (pp. 24-25).

11. The Malayāḷam habit of evaluating Skt. *t* in certain positions as *l* goes back to the E.O.M. period. (p. 25).

12. It is tenable to assume that the alveolar group *ṉṟ* was evaluated in the E.O.M. period as a voiced alveolar plosive (without any trill, unlike in modern Tamil where there is a distinct trill). The change of the older *ṉṟ* to *ṅṅ* appears to have become fully established some time after the E.O.M. period and very probably before the period of *Uṇṇuṅīlisaṅdēśam*. (p. 27).

13. The Mal. habit of incorporating the glide-developed *-v-* in noun bases (as in modern Mal. *pūvu*) goes back to the E.O.M. period, as shown by the 12th century *viḷuvu*. (p. 30).

14. Already during the E.O.M. period *-y-* comes to displace *-v-* as the intervocal glide (p. 30), and the short *-v-* is written instead of *-vv-*, though, generally speaking the literary Tamil rules of vocalic sandhi are observed during the period. (pp. 32-33).

15. The change of *-m* to *-v* before the samuccaya *-um* (as in *caravum*) seems to have come into general vogue only after the E.O.M. period. (p. 34).

16. The sandhi rules of Early Old Mal. are generally in agreement with those of literary Tamil. There are, however, instances even in the earliest inscrr. where the older rules are not observed, as in the colloquial Tamil inscrr. of the corresponding period. Such instances increase in number with the passing of time, showing that Malayāḷam began to give up the sandhi rules of the parent speech and standardise new rules in the period under study. (pp. 32-43).

17. The inscrr. contain a large number of IA loan-words borrowed either directly from Sanskrit or from Prakrits. The Skt. loans generally show structural modifications when they contain such phonemes or phonemic groups as are outside the traditional Tam.-Mal. 'sound-stock'. Many of the Pkt. loans appear to have been inherited by Malayāḷam from the parent stage.[1]

18. Early Old Malayāḷam had the following case-endings:

acc. *-ai;*
instr. instr. *-āl* and *-koṇṭu;*

1. A *historical* study of the problem of loan-words is one of the most important tasks awaiting the labours of the student of Dravidian. The problem is full of potentialities, and may throw unexpected valuable light on many an obscure problem even in fields which are ordinarily outside the purview of the linguistic scientist. It is interesting to note in this connection that even the earliest Dravidian literature shows clearly the influence of Indo-Aryan. (Cf. C. Kunhan RAJA's essay on Malayāḷam in 'The Indian Literature of Today' (P. E. N. Symposium, 1945), p. 88. (The International Book-House Ltd., Bombay, 1947).

social.	*-oṭu, oṭukūṭa;*
dat.	*-ku (-k-ku), -u-k-ku, -iṉ-l*
	-iṉ-u-kku, iṉu, -iṉṉu;
abl.	*-il-ṅiṉṟu;*
gen.	*-uṭai, -uṭaiya, (-iṉ);*
loc.	*-il, -uḷ, -attu, -akattu, -kāl, -kīḻ -mēl, -akattiṉuḷ, -el* (?),
	-kal, -kal-il. (pp. 68-103).

19. *il,* the seventh case ending, appears to have been a development out of an earlier *-uḷ. -attu* also can be similarly derived. (p. 82).

20. The phenomenon of functional syncretism existed in the E.O.M. period. (pp. 84-85).

21. The characteristic Malayāḷam first person singular pronoun *ñāṉ* does not appear to have been current during (at least the earlier part of) the E.O.M. period,[2] *ṅāṉ* being the first person singular met with in the inscriptions.

The form *ivu* appearing in a 12th century inscr. lends support to the view that the neuter plural *avai* and *ivai* are developments of earlier *av-* and *iv-*. (p. 87).

22. Appellative nouns of number formed by adding personal terminations to the basal form (?) of the numerals were common during the E.O.M. period. (p. 101).

23. Early Old Mal. had many verb-bases which have gone out of use in later periods (particularly in modern Mal.). (p. 103).

24. Transitival and causatival verb-bases were generally formed in Early Old Mal. in the same way as in Middle Tamil. The *ceyyikk-* type of Mal. causatives, which have arisen from the older *ceyvikk-* type, are also represented in Early Old Malayāḷam (p. 104).

2. There is a possibility that what was written as *ṅ* in *ṅāṉ* was actually evaluated as *ñ* in that particular word in the E.O.M. period, or at least towards the end of it. It is important to note here that *Līl.*, while pointing out the difference between Tam. and Mal. (I, 1, comm.) mentions only *ñāṉ* and contrasts it with Tam. *yāṉ* (and not with *ṅāṉ* which was current in the Tam. of that period). The problem here is parallel to that of the representation of *ṅṅ* (or *ṅt*) with the symbol for *ṉṟ* for a time during the Old Mal. period (cf. *GL*, p. 59).

It may be noted here, however, that *Kauṭalīyam bhāṣā* (which I am inclined to place at the end of the E.O.M. period for linguistic reasons) shows instances of *ñān* besides nāṉ. This would mean that ñān had become a feature of the colloquial speech of Kērala in the twelfth century. By the fourteenth century it had become so deeply rooted in the speech of Kēraḷa that Līlātilakam considers that only ñān is right for *Kēraḷa bhāṣā.*

25. Personal endings for verb forms seems to have been the rule in Early Old Malayāḷam. However, the habit of discarding personal terminations appears to have become popular quite early in the history of Malayāḷam, since even the earliest inscriptions (belonging to the last quarter of the ninth century) have instances without such terminations. The frequency of occurrence of this phenomenon increases with the passing of time. (pp. 104-108).

26. Obligatives were frequently formed in Early Old Mal. with the appellative verb *kaṭavaṉ*, but this type seems to have gone out of use by the close of the period, since the inscriptions do not show it after the 11th century. The *ceyvitu*-type of imperatives and *peṟār*-type of prohibitives were also prominent features of Early Old Malayāḷam. (pp. 112-114).

27. The optative, conditional, concessive, infinitive and negative moods of Early Old Mal. were identical in formation with the corresponding Middle Tamil forms. (pp. 114-117).

28. Early Old Mal. had infinitive participles of the *-a* and the *-vāṉ* types, as in Middle Tamil. The *-vāṉ* type was used exclusively to express purpose, whereas the *-a* type was put to varied syntactic uses. (pp. 117-120).

29. Relative participles ending in *-iṉa*, *-iya*, and with the expletives *-uṭaiya* and *-uṭaiyaṉa* were current during the E.O.M. period. The *iṉa* forms appear to be earlier than the *-iya* forms, since the later inscriptions rarely show the *-iṉa* forms. (p. 125).

30. Participial nouns of the types *uḻuvār* and *mūttōr* were current during the E.O.M. period (p. 130). Early Old. Mal. had future participials of the type *ńāṭuvāḻumavar* (p. 130).

31. The verbal noun types of Early Old Mal. were identical with those of Tamil, both functionally and structurally. (p. 133).

32. The common negative formation in E.O.M. was with the negative affix *ā*. (p. 134).

33. Appellative formations with personal terminations *directly* affixed to noun bases were commonly used in Early Old Malayāḷam. (p. 136).

34. The normal sentence-type in Early Old Mal. was actor-action, the usual word-order being subject-object verb. (p. 154).

35. The fourteenth century Malayāḷam grammar *Līlātilakam* reveals that Malayāḷam literary tradition continued to be conservative even long after the Malayāḷam language in everyday use had changed radically, as reflected by the inscriptions of the Early Old Malayāḷam period.

This analytical study of the Early Old Malayāḷam inscriptions shows that the 12th century of the Christian era marked an important stage in the development of the Malayāḷam speech. In that century, owing to antecedent developments, there were enough alternative speech-forms in Malayāḷam to make new analogic changes and innovations on a large scale relatively inconspicuous and acceptable.[3] The abandonment of the older sandhi rules and the emergence of new phonological and morphological features during the Early Old Malayāḷam period (not to speak of the important semantic and vocabularial developments which have been kept outside the purview of the present study) enabled the Malayāḷam speech to acquire, by the close of the period, an individuality all its own, which sharply differentiated it from the speech of the neighbouring Tamil area. Literary tradition, however, clung to many older rules in all departments of grammar for some time after the Early Old Malayāḷam period; but the new forces (to which, perhaps, the influence of Sanskrit contributed a great deal) did not fail to make their impress even on a conservative[4] scholar like the author of *Līlātilakam,* whose grammatical outlook on the whole is marked by the recognition of the independence of the speech of Kēraḷa.

3. This is a common phenomenon in the history of languages. (*cf.* BLOOMFIELD, *Language,* p. 409.)

4. Conservative in the sense that he respected tradition in the matter of laying down rules of grammar for Malayāḷam.

PART II

TEXT OF THE INSCRIPTIONS

ORTHOGRAPHIC ERRORS

The following may be regarded as orthographic errors (see pp. 14-15), arising out of the carelessness or the ignorance of the scribe :—

10th century :

1-21 : *ṅāḷaillāñ* for *ṅālellāñ.*
1-26 : *an̲ukkirāmañ* for *an̲ukkirakañ.*
2-2 : *n̲ālukuṭi* for *ṅālukuṭi.*
2-5 : *ceyiccu* for *ceyvicca.*
2-18 : *kūṭikaḷayum* for *kuṭikaḷayum.*
2-22 : *pumiyai* for *pūmiyai.*
2-22 : *ulakū* for *ulaku.*
2-51 : *Man̲evān̲* for *Maruvān̲.*
3-2 : *pumi* for *pūmi.*
3-2 : *kalamam* for *kalamum.*
3-3 : *muṭṭikuvarār* for *muṭṭikkumavar.*
3-4 : *aviraper̲āka* for *avirapper̲ār.* (?)
3-4 : *aṭamittuṭavin̲āl* for *aṭumiṭattuttuṭavin̲āl.* (?)
3-6 : *mun̲n̲uṭuka* for *mun̲n̲aṭuka.*
6-95 : *patan̲ara* for *patavāra.* (?)
12-4 : *ippimi* for *i-p-pūmi.*

11th century :

5-16 : *uṭaiyu* for *uṭaiya.*
8-5 : *muḻāvu* for *viḻāvu.*

12th century :

5-6 : *koḷḷa* for *moḷḷum.*
5-29 : (The Editor thinks that *mūn̲r̲u* stands for *mūn̲r̲on̲r̲u*).
5-33 : *ceytutovitu* for *ceytupōvitu.*
5-47 : *ṅaṅtāman̲a* for *ṅaṅtāvan̲a.*
5-48 : *vāriyamuṭayāvaraḻ* for *vāriyamuṭayavaraḷ.*
5-99 : (The Editor thinks that *koṇṇā* is a mistake for *koṇattāl.*
5-103 : (The Editor thinks that *Iṭṭain̲nāṭṭu* is a mistake for *Iṭaippaḷai-yan̲āṭṭu.*)
5-103 : *kōttatin̲n̲u* for *kōṇattin̲n̲u.*
5-184 : *ṅāl* for *ṅel.*

5-188 : The Editor suggests that *kok-iṭai* has to be corrected into *kōk-kuṭai*, 'what is to the king'.

5-189 : The Editor thinks that *veḷḷayāṭaraiyuṅ* stands for *veḷḷaṅāṭa-raiyuṅ.*

5-189 : *Kaṉiṅāṉiccu* for *kaṅkāṉiccu* or *kaṅṅāṉiccu.*

5-191 : (The Editor thinks that *upperuviyar* stands for *uppu peruvi-laiyar.*)

5-194 : *pirammāttuvañ* for *pirammattuvañ.*

vacai for *vakai.*

5-195 : *-pattu* for *lattu.*

Iṭaippaḷayamāṭṭimmel for *Iṭaippaḷayaṉāṭṭiṉmēl.*

5-196 : *vaṭṭaṉṉil* for *vaṭṭattil.*

5-197 : *muppaṟutaim-paṟai* for *muppattaim-paṟai.*

5-208 : *civiṉṉiṉil* for *civitattil.*

5-209 : *ṭaiypāḷuṉāṭṭil* for *Iṭaippaḷayaṉāṭṭil.*

5-210 : *Ciṟṟāṟṟaṅṅarāṅil* for *Ciṟṟāṟṟaṅṅarayil.*

5-213 : *mappatu* for *muppatu.*

5-216 : *vaṭṭaiṉil* for *vaṭṭattil.*

5-227 : *mūcaiyil* for *mūlaiyil.*

5-236 : *civitat* for *civitattil.*

5-240 : *ṉṉiṉ* for *-ttiṉ.*

5-241 : (The Editor corrects *aypatu* (a mistake for *aympatu*) to *aṟupatu* which is the correct total in question.

5-245 : *Ciṟṟāṟṟaṅṅarailil* for *-karaiyil.*

5-250 : *atirikikka* for *atikarikka.*

5-252 : *lāḷ* for *ṅāḷ.*

5-253 : *maṉiṭacam* for *maṉiṭarum.*

ṉiḷḷaiyār for *piḷḷaiyār.*

5-257 : *kuḷḷa* for *oḷḷa.*

vel for *ṅel.*

5-258 : *piḷḷaimār* for *piḷḷaiyār.*

matitakaṅ for *matilakaṅ.*

5-259 : *puṟaptetuvāḷuṅ* for *puṟappotuvāḷ.*

5-264 : *arutāpoḷikil* for *arutātoḷikil.*

eṭattiṅ for *eṭattil.*

kūṭṭimuṭṭiyaṉi for *-yati.*

5-265 : *poṭam* for *tenṭam.*

5-266 : *pātamūlaṉṉilo* for *-ttilo.*

5-267 : *oroṉṉarākil* for *orottarākil.*

ponṭamum for *tenṭamum.*

5-268 : *peraiyattum* for *peraiyiṭattum.* (?)

5-270 : *pātamūlattiṉ* for *pātamūlattiṉ.*

peṉa for *pēta.*

kalavolai for *kaṭavolai*.

5-271 : (The Editor suggests that *perāṇam* should be read either as *peramāṇam* or as *piṟamāṇam* or as *piramāṇam* < *pramāṇa*.)

veṟu for *vēṟu*.

5-272 : *poruḷarikil* for *pōruḷarākil*.

5-273 : (The Editor thinks that *vomame* stands for *pōkamum*.)

5-274 : *kaṟpiccumaikkum* for *kaṟpiccamaikkum*.

5-275 : *ṅiruveṉṉāḻikai* for *tiru-*.

5-276 : *koḷuḷuṉticcu* for *koḷutticcu*.

5-277 : *pūpṭiccu* for *pūṭṭiccu*.

puṟaptetuvāḷ for *puṟappotuvāḷ*.

5-278 : (The Editor thinks that *cemmu* stands for *ceṉamum*.)

akattetuvāḷ for *akappotuvāḷ*.

5-283 : *celṉāka* for *celvatāka*.

13th *century* :

1-5 : *cevattiṉu* for *cevatiṉu* (< *ceyvatiṉu*).

3-2 : *āṉṟu* \ for *aṉṟu*.

4-5 : (*y*) *ammaiyāṉa* for *ammaiyiṉ* (?).

oḷaya for *oḷiya* (?).

muṉṟeṭattum for *mūṉṟeṭattum*.

10th: No. 1.

TAS, II, pp. 67-68. Close of the ninth century.

First plate: first side.

1. svasti [||*] kō-t-Tāṇu-Iravikku-t-taṉ pala ṅūṟāyirattāṇṭum maṟuku-talai-.
2. c-ciṟaṅt-aṭippaṭuttāḷāṅiṉṟa yāṇṭuḷ-c-cellāṅiṉṟa yā-.
3. ṇṭaiṅtu [||*] i-vv-āṇṭu Vēṇāṭu vāḷkiṉṟa Ayyaṉaṭikaṭiruvaṭi-yum-.
4. matikārarum pirakirutiyum maṇikkirāmamum ṉa[1] mañcuvaṇṇa-mum Puṉṉaitta-.
5. lai-p-patiyum-m-uḷvaittu-k-Kurakkēṇi-k-Kollattu Eśodā-Tapirāyi ce-
6. yvitta Tarusāppaḷḷikku Aiyyaṉaṭikaṭiruvaṭikuṭutta viṭupēṟāvatu [|| *] nā-.
7. lukuṭi īḻavarum-m-akkuṭikkēṟum-m-īḻakkaiyar-eṇmarum-m-ivakaḷ paṅṅi-ruva-.
8. rum-m-oru vaṇṇārakkuṭiyum-ivvaṉaivarkkuṅ taḷaikkāṇamum ma-
9. ṉai mēyppāṉkoḷḷumiṟaiyuñ cāṉṟāṉmāṭṭumēṉipponṉum poli-p-ponnu-
10. m-m-iravucōṟuṅ kuṭaṅāḻiyum-m-ivvaṉaittuṅ koḷḷappeṟār [||*] pārkkō-
11. luṅkappāṉum paiñcakkaṇṭiyum muṉṉam peṟṟuṭaiyaṉa ṅāṉum viṭu-
12. pēṟāka aṭṭikkuṭuttēṉ-iṅṅālukuṭi īḻavarum-m-orukuṭi vaṇṇāru-

Second plate: first side

13. m-[||*] m-evvakaippaṭṭa iṟaiyuń Tarisāppaḷḷiyārkku viṭu-
14. pēṟāka-c-ceppuppattirañ ceytaṭṭikkuṭuttēṉ [|| *]i-
15. vv-īḻavar tamvanṭi kuṇańt-aṅkāṭiyilum matililum viyāparikkappeṟuvar [||*] vaṇ-
16. ṇāṉum vańtaṅkāṭiyilum matililum vańtu taṉ paṇi
17. ceytukoḷḷa-p-peṟuń [||*] tīyamāḻvāṉum matiṉāyakaṉum maṟ-
18. ṟum-m-evvakaippaṭṭārum-m-eppiḻai colliyum-m-ivaka-
19. ḷai-t-taṭumāṟa-p-peṟār [||*] ivakaḷ-eppiḻaiceyyilum[2] pa-
20. ḷḷiyārēy ārāńtukoḷḷa-p-peṟuvar [||*] ulakuñ cańtirā-

Second plate: second side

21. tittarum uḷḷa ńāḷellāñ[3] ceppuppattiratti-
22. 1 paṭṭaparitu viṭupēṟu aṭṭippēṟāka aṭ-
23. ṭikkuṭuttēṉ [|| *] ipparitu viṭupēṟu aṭṭippēṟāka
24. Ayyaṉaṭikaṭiruvaṭiyāl Tarīsāppaḷḷikku aṭṭuvi-
25. (t) ttukkuṭuttāṉ Maruvāṉ Sapīrīśō [||*] itu kāttilakkila-
26. kaikikkum-m-avarkku-t-tēvarēyaṉukkirāmañ ceyvārāka [|| *] A-
27. y[y*] ṉeḻuttu [|| *] Vēḷkula Cuńtaraṉukkum-okkum[4] * Vicaiya-

1. Instead of supposing that *maṇikkirāmam* was written over an erasure, as the editor does, it appears to be more reasonable to suppose (since the 'erasure' is more prominent than the 'over-writing') that *maṇikkirāmam* or whatever else was written was erased subsequently.

2. p.r. *'ivakaḷai-p-piḻai colliyum'*.

3. p.r. *'nāḷaillām'*. Apparently no distinction is made in the inscr. between *ḷe* and *ḷai*. cf. *taḷai-* in line 8.

4. In line 27 after *eḻuttu* and *okkum* there are two 'marks'. These may be merely punctuation marks or may even be the signatures of the individuals concerned.

10th: No. 2.

TAS, II, pp. 80-2. Close of the ninth century.

First plate: first side

1. iraṇṭukuṭi ci . . . ru viyarum [pa*] ḷḷi-p-pūmiykku kārā
2. ḷar ṉālukuṭi veḷḷāḷarum ivvaṉaivaru [m*] tēvarkku ńaṭuvaṉa ńa-
3. ṭṭu iṭuvaṉa iṭṭu paḷḷikku eṉṉaikkummaṟṟum vē-
4. ṇṭuñcaṭaṅku [ku*] ṟavu[1] vārātēy ceyyakkaṭavarāka camaiccu i-
5. ń-ńakaram kaṇṭu ńīrēṟṟa Maruvāṉ Sapīr-Īśō ceyviccu Tari-
6. ssāppaḷḷikku kuṭutta bhūmi-y-āvatu [|*] kōyilatikārikaḷ Viyarākaṇa-[2]
7. tēvar uṭpaṭa [i*] ruńtaruḷi-p-piṭińaṭatti ńīrttuḷḷiyōṭu kū-
8. ṭa Ayya . . . . . . ḷ[3] tiruvaṭiyum iḷaṅkūṟuvāḻiṉṟa Rāmatiru-

9. vaṭiyum a....[4] kārarum prakṛtiyum aṟuṅūṟṟuvarum Puṉṉaittalaiy-
10. patiyum Pū [ḷai]-k-kuṭi-p-patiyum uḷppaṭavaccu i-p-pūmikk-e-
11. llai [|*] kiḻakku vayalkkāṭēy-ellai-y-ākavuṅ-kāyilumuṭpaṭa-t-te-
12. ṉ kiḻakku ciṟuvātilkkāl matilēy-ēllaiyākavum paṭiññāyi-
13. ṟu kaṭalēy-ellai-y-ākavum vaṭakku-t-Tōraṇattōṭṭamēy-ellaiyā-

First plate: second side

14. kavum vaṭakiḻakku-p-Puṉṉaittalai Aṇṭilaṉtōṭṭamēy-ellaiyākavu-
15. m i-ṅ-ṅāṉk-ellaikkum akappaṭṭa bhūmi piṭiṅaṭatti ulakum caṅtirā-
16. tittiyarum oḷḷaṅāḷellāñ-ceppupattirañ-ceytukuṭuttēṉ Ayyaṉa-
17. ṭikaḷ-tiruvaṭiyum Irāma-tiruvaṭiyuṅ-kōyilatikārikaḷu (ḷ) um paṭamai-
18. ttaruḷi i-p-pūmiyil-k-kūṭikaḷayum eppiḻaicolliyum paḷḷiyārēy ī-
19. piḷaiyumaḷi .... [4]vilaiyum mulaivilaiyum paḷḷiyārē koḷḷa-p-peṟuvār [|| *]
20. ṅaṅtamarep ...... [5]paṭṭārum eppiḻaicolliyum pūmittalaiyum
21. kuṭikaḷpa ...... [6]collappeṟār [|| *] aṟuṅūṟṟuvarum añcuvaṇṇa-mmumaṇi-
22. kkirāmamum irakṣikkakkaṭavar [|| *] paḷḷiyaiyum pumiyaiyum ulakū-
23. m caṅtirātittiyarum oḷḷaṅāḷellāmñ ceppupattirattil-
24. ppaṭṭavaṇṇañ ceytukoḷḷa-k-kaṭavar añcuvaṇṇamum maṇikkiṟa-
25. ramamum [|| *] ivakaḷkku-k-kōyilatikārikaḷ Viyarākatēvaruḷ-ppaṭa i-
26. ruṅtaruḷ Ayyaṉaṭikaḷ-tiruvaṭiyum Irāmatiruvaṭiyum uṭpaṭa i-
27. ruṅtaruḷi (here occurs some letters in what appears to be Nāgari alphabet, perhaps the signatures of the donors) ivakaḷkku-k-kuṭutta

Second plate: first side

28. viṭupēṟāvatu [| *] aṟupatiloṉṟulkuṅkaḷvarat ....[7]lulkillaiyākavum * aḻivu-
29. lkillaiyākavum [| *] ivakaḷ koḷḷum aṭimaikku āḷkkācu kolḷa-p-peṟārā-
30. kavum [| *] vāyiṉam varumatil varattilum pōkkilum eṭṭu kācu koḷḷa-k-kaṭavā-
31. rākavum [| *] veṭiyilum paṭakilum pōkkilum varattiluṅṅālu kācu koḷḷa-
32. k-kaṭavārākavum [| *] ulkupaṭuñcarakku ivakaḷai-k-kūṭavaccu ulku viṭuppatākavu-
33. m [| *] carakku vilaiyiṭumiṭattum maṟṟumē svāmikāriyam ekkāriyamum-
34. ivakaḷaikkūṭṭiyē ceyvatākavum. [|*] aṉṟaṉṟu paṭumulku añcuvaṇṇamum
35. maṇikkirāmamum ilakkiccu vaippatākavum [| *] ṅāluvātilakattu-
36. m vilakkum pūmiyāka kārāṇmai-k-koṭukkum-eṭattuṅ kōppatavāraṅ-
37. kōyil koṇṭu patippatavāram añcuvaṇṇamum maṇikkirāmamu-
38. ṅ koḷvatāka [| *] ivakaḷkku maṅkalyattukku āṉaimēl maṇṇuṅīr muta-
39. lāka eḻupattiraṇṭu viṭupēṟum vaccukkuṭuttār kōyilati-

40. kārikaḷ Viyarākatēvar uḷppaṭa iruṅtaruḷi Ayyaṉaṭi-
41. kaḷ tiruvaṭiyum Rāmatiruvaṭiyum prakṛtiyum ati-

Second plate : second side

42. kārarum aṟuṅūṟṟuvarum Puṉṉaittala-p-ipatiyum[8] Pūḷaikkuṭi-p-pa-
43. tiyum uḷppaṭavaittu ulakum caṅtirātittiyarum oḷḷa ṅāḷellā-
44. m i-vv-aṭṭippēṟellāñ ceppuppattirattilppaṭṭavaṇṇañ ceytu
45. koḷḷa-p-peṟuvar [| *] añcuvaṇṇamum maṇikkirāmamum ivakaḷkku
46. aṉṉiyāyamoṇṭāyil ulkutulākkūlitaṭuttuṅ taṅṅaḷ aññāyaṅ tīr-
47. ttukoḷḷa-k-kaṭavar [|*] taṅkaḷ ceyyum piḻaiyuṇṭākiṟṟaṅkaḷai-k-koṇṭēy-
ārāññu-
48. koḷḷa-k-kaṭavaṟāka vum-iṅ ṅakaṟattukku-k-kārāḷarāka ṅīrēṟṟār añcu-
vaṇṇamu-
49. m maṇikkirāmammum [| *] ivaruḷ-iraṇṭu talaiyāruṅ kūṭi-c-ceyvatēy ka-
50. rumamākavu [|*] -m-iṅṅakaraṅkaṇṭu ṅīrēṟṟavarumāṉa Sapīr-īśō muṉ-
ṉam paḷḷi-
51. yār peṟṟuṭaiya pārkkōlum pañcakaṇṭiyum Maṉevāṉ Sapīr-īśō ṅe-
52. ṟuttu ṅiṟaikkūli paḷḷikku kuṭukka-k-kaṭavar [|*] ituvum aṭṭip-
53. pēṟāka-k-kuṭuttēṉ ulakuñ (ñ) caṅtirātittiyarum oḷḷaṅāḷellām [||*]
54. (The same writing as is found in line 27 occurs in this line also.)

1. p.r. *vēṇṭuñ* (*ṅ*) *kaṭaṅkuṟa* (*ṟai*) *vu.*
2. p.r. (1. 6) *Vi-* (1. 7) *yarākaṇatēvar.*
3. *Ayyaṉaṭikaḷ* (Ed.). 4. *atikārarum* (Ed.)
4. GUNDERT supplies the blank thus: *piḻaiyum-aḻivum talai.*
5. *naṅtamarappērppaṭṭum* (Ed.).
6. *kuṭikaḷ pāṭuñ-* (GUNDERT).
7. *varattilu* (Ed.)
8. p.r. *Puṉṉaittalai patiyum.*

10th: No. 3.

TAS, II, pp. 85-86 Close of the ninth century.

1. Śrī * kō-t-Tāṇu Iravikku cellāniṉṟa yāṇṭu patiṉēḻu [||*] a-vv-āṇṭu
Tiruvāṟṟuvāy sabhaiyum-aṭikaḷmārum-avirōtattāl-k-kūṭi-c-ce-
2. yta kaccam [|*] Puṉcaippaṭakārattu Cēṅtañ-Caṅkaran āvaṇi-yōṇama-
ṭuvāṉ koṭutta pumi [|*] Cēṅṅañcēṅṅaṉārkari patinkalamam [|*] kāṭēṟu-
3. aiṅṅūṟṟu ṅāḻiyum [|*] ivaikoṇṭu ūrmaṟaiyāl oṇamaṭa-k-kaṭavar [|*]
ūṭṭam muṭṭikuvarār aimpattuṅālu kāṇaṅ poṉpaḷaṅkāyuṉōṭu
4. oppatu [|*] i taṇṭamiṭṭu ūṭṭumaṭa-k-kaṭavar [|*] iraṇṭum ceyātoḻikil
avar aviraperākā [|*] ūṭṭu paricu aṭamittuṭa viṉāl oru-

5. tuṭavu ṅeyum payaṟum caru[k*]karaiyum vāḻaippaḻamu[m*] kūṭa ūṭṭa-k-kaṭavar [|*] eṉṉaiyu[m*] aṭa-k-kaṭavar [|*] ucca aka[t*]tu pañtīraṭi tuṭaṅki añtiyil mu-
6. ṉṉuṭuka [|*] aṟatiṉṟiṭaiīṭu uṭaiyārācēṟvarkaḷai ū[ṭ*]ṭa kaṭavar [|*] tēvar[k*] ku [eṉ*]ṉāḻi aricikoṇṭu ṅivēti[k*]ka kaṭavar [|*] uḻa[k*]ku ṅeyum ṅivēti[k*]ka[|*]
7. muḻakku ṅeykoṇṭu tiruviḷakku vai[k*]ka [|*] ṅāṉāḻi aricikoṇṭu pūtapali ū[ṭ*]ṭā kaṭavar [|*] pātamūlikaḷil ṅaṭañtu cēṟtukoḷvār
8. [k*]ku añāḻi ṅel kuṭu[k*]ka-k-kaṭavar[||*]

Second side

10th: No. 4.

SII, VII, pp. 72-73 15th year of Kōtai Iravi: c. 925 A.C.

1. Svasti śrī[||*] ko-k-Kotai-Iravikku-
2. c-cellāṅiṉṟa yāṇṭu
3. patiṉaiñcu[|*] a-vv-āṇṭu Kaṟkoṭṭupuṟat-
4. tu Kaṭampaṅ-Kumaraṉ taṉṉuṭaiya Kumaranārā-
5. yaṇapurattu tevarkku ceṉṉaṭaikkamaitta
6. [paṇṭa]ṟutumaṉ ṅāṟkalappāṭu Iḷaṅkaṇṭu mup-
7. patiṅtūṇippāṭu Palāvūṉkaḷamiḻi patiṉtūṇiyā-
8. loṭi patiṉtūṇippāṭu Kuṟunūñc-aiṅtūṇip-
9. pāṭu Aṭimāṟi aiṅtūṇippāṭu ivai eḻukalam pa-
10. tiṉtūṇippāṭu [ṅi]vedyattiṉukku Kuḻukkalka-
11. ṭṭu kalappāṭu Cuḻiyal kalappāṭu Kuḷamurutai pati-
12. ṉorutūṇippāṭu Kuḻiyarakkalappāṭu ivai mukka-
13. lam patinorutūṇippāṭum-oru viḷakkiṉukku Ā
14. yiṉattaṅkalam-aiṅttūṇippāṭu Cikariyaṉkalam-ain-
15. tūṇippāṭu Neṭumaṉ muppatiṉtūṇippāṭu ivai nā-
16. ṟkalappāṭum-oru viḷakkiṉukkum-Iṭākkoṭu patiṉai-
17. ṅtūṇippāṭu Māṅkoṭu pañtirutūṇippāṭu Pāṉko-
18. ṭu patiṅtūṇippāṭu Paḷamuṇṭai patiṅtūṇippā-
19. ṭu Aṇṇaikaṭṭuvāṉ patiṅtūṇippāṭu Maṇaloṭi
20. patiṅtūṇippāṭu Cāttaṅkoṟṟi aiṅtūṇippā-
21. ṭu Marakkāṭṭiṟ pañtirutūṇippāṭu ivai ṅāṟka-
22. laṉe nāṟṟūṇippāṭum Kūṟai Cikaṇṭaṉ puraiyiṭat-
23. tiṟ pātiyuṅ kūṭa-c-Cāṅtikku palavayal
24. muppatiṉṟūṇippāṭu Neṭumaṇal-aiṅkalappāṭu Ta-
25. mai patiṉmuttūṇiyaraippāṭu Aṇikkarai pati-
26. ṉṟūṇippāṭu Muṇṭaiyūrakattu patiṉaiṅtūṇip-
27. pāṭu ivai ṅāṟkalam-eṇṭūṇiyaraippāṭum Cāttaṅka-
28. ṇṭa[ṅamaitta] kalappāṭuṅ-kūṭa akkirattiṉukku Vi-
29. yaimiḻi patiṉṟūṇippāṭu Ciṟupalāviṉku-

Second face

30. ḷamiḻi patiṉṟūṇippāṭu Ciṟumarakkāṭ-aiṅtū-
31. ṇippāṭu Ṅākamputuṟṟilu[m] aiṅtūṇippāṭu ivai[mup]-
32. patiṉṟūṇippāṭum kuḷattiṉukku vaṭakkiṉ purai-
33. yiṭamuṅ Tuṭaikkumaṟāyiṉuḷ-ḷ-irukkalappāṭu Valaṅkā-
34. lmiḻi patiṉṟūṇippāṭu ivai aimpatiṉṟūṇip-
35. pāṭum purai putukkuvāṉ palikk-amaitta pūmiyāvaṉa [|*] [Ñūñ]-
36. ciṉukku paṭiñcāyaṟṟu puraiyiṭamuṅ Toḻukkuṟaiyiṟ pa-
37. tiṉṟūṇippāṭu Kaccikāṭṭiṟ patiṉṟūṇippāṭu Kākkaikā-
38. ṭṭiṟ eḻutūṇippāṭu Cevvaikkāṭu añcoṉṟu ṅivedya-
39. p-puttatiṟṅālum patiṉorutūṇi iraṇṭu viḷakku pu-
40. ṟattilum-iraṇṭu poṟi cāṅtippuṟatti[l *] kalamuṅ tū-
41. ṇi akkirappuṟattiṟ oru poṟi Kaṇpūḻiṟ patiṉṟū-
42. ṇippāṭu Irañcikuṇṭu patiṉṟūṇippāṭu Toḻuk-
43. kuṟayiṟ patiṉṟūṇippāṭum kuṭiyirukkai purai-
44. yiṭamum oḻiya ṅāṟpatu poṟi ṅāṟ pāṭṭam pali-
45. ppuṟam ṅivedyamuṅ tuṭaiyum ṅaṅdāviḷakkum cā-
46. ṅtiyum agramum paliyum ivvāṟiṉukkum-a-
47. maitta bhūmi iraṇṭu Vivāhataḻiṉampiyum mūt-
48. tavakaḻiruvaruṅ-kaṇṭucelutta-k-kaṭavar [| *] ivai
49. uḻuvārum vilakkuvārum paṟipporum paṟi-
50. pporkku paṅkuceytavarum Mūḻikkaḷavyavastai-
51. yāṟ ke[ṭ*]ṭa-k-kaṭavar [| *] avakaḷ saṅtatiyum ṅūṟṟukkaḷa-
52. ñcu poṉṟaṇṭaṅ koṭuttaṉṟi kūṭakkaṭavaral-
53. lar [| *] ivaṉṉu ṅāṟpattiru kaḷañcu Perumāḷ koḷ-
54. ḷa-k-kaṭavar [| *] irupatiṉ kaḷañcu Āḷkoyil ko-
55. ḷḷa-k-kaṭavar [| *] paṅtirukaḷañcu poṉ Vāliceri sa-
56. bhaiyārum Pulikkaṟpuṟai sabhaiyāru-
57. ṅ-koḷḷa-k-kaṭavar [| *] patiṉāṟkaḷañcu po-
58. ṉ Tevar koḷḷa-k-kaṭavar [| *] aṭuttu kaṇṭu ka-
59. ṭaviyōṉ paṅtirukaḷañcu poṉ koḷḷa-k-kaṭavar [| *]

Third face[1]

60. ñciyaṟ
61. Coṇāṭṭu ka-
62. ḷattiru
63. kkai . .
64. ttu tiru-
65. kkuḷamu-
66. m Peru[ṅ]-
67. taccaṉ
68. . .
69. . . . .
70. . .
71. muṭṭukil
72. Cuḻiyi-
73. liḷ Ciṟ-
74. ṟaṟaiyi-
75. l naṅkai-
76. yār koṭu-
77. tta pati
78. ṉṟūṇi-
79. ppāṭu-
80. m Komara-
81. ṅārāyaṇa-
82. purattu
83. Ceravaṉ-

84. ṉāṭṭu Ceṭ-
85. ṭiyār oru
86. tiruvakki-
87. rattiṉuk-
88. ku koṭutta
89. poṉ muppa-
90. ttaṟu kaḻai-
91. ñcu tevaṅā-
92. ḷiyāl-l-i-
93. ruṅāḷi ti-

1. At the beginning of this face some lines are lost and across this face are found the following three lines:

1. *Veḻippūrum Malāviliyūru*
2. *Cevvaikkuṟum ippari*
3. *cu kaṇṭu celutta-k-kaṭavar*

10th: No. 5

TAS, VIII, pp. 44-45. Kali 4030 odd: c. 930 A.C.

1. ṅaṭṭavaṉukku cīvi [tammiḷai ....] koṭukkuṅ-ṅel-iṭaṅkaḷi-
2. yālirupatiṉ kalam Nampiṅākaravāḻkaiyāṉiyati-c-cellumari ṅāḷi-
3. yuri āka muṟṟu ṅāḷ paṅku oṉṟu ṅiyati aññāḷi cāṅtikku
4. kāṇam poṉṉum ṅiyati oru piṭi ṅey ṅeyyeṟakum paṭaku mūṉṟukāṇam poṉ Palā-
5. kkāṭṭuceriyuṅ-Ṅeṭuṅkāṭuṅ-Tāḻpatti pūmiyuṅ-Kuṟuvayalum Paḷḷippuṟa-mum Ve-
6. ṅkāvaṉūru Māṭamaṇṇum Māṟalum Miḷai [y]yaṉūrum-Iyāṉamaṅkalattu Māṭampi pūmiyu-
7. m-ivaiyiṟṟāṟ cellum muṭṭāviḷakkaṭṭu ivaiyiṟṟiṉilā [vattā-c-] ce-
8. llum muṭṭāviḷakkoṉṟu [Putu] vāyālum Perukaṉṟāyāṟum pūtapali-
9. kku ti[ṅka]ṭ paṅṅiruṅāḷi ariy Perumaṇkāṭṭāṟṟaṟkiṉa vi[ḷa]kku
10. paṅṅiraṇṭu paṅku ṅey Perumpuṟṟūṟā[ṟ] paṅṅiraṇṭu paṅku Kaṇavati araiyaṭattāl
11. ṟuva .... iraṇṭaiyā[kk]aṉa [arai] yiṭattāṉālu paṅku Ciṟukoṭṭā[re]ṭṭu paṅku i-
12. [I]ṭṭiyaikkāṭar araiyiṭamuṅ-Ṅārāyaṇaṉ Cāttaṉ araiyiṭamum- i[vai]yi [ṟṟi]liraṇṭu paṅ-
13. ku ivai ṅāṉ paṅkiṉṉiṭṭu .. ṉā Ce .. ṭaikkamaiṅta[vū] riṟ[pā]ṭṭamiṭākkāl [Veṟor]-k-kaṇkāṇi
14. kāṭṭumava[r]kaṭkiṭṭa pūmiyā ṉiyati ..... paṇika[ṭa] viyar oripaṇi muṭṭil-iṭaṅka-
15. [ḷi]yāṉāḷi ari orupoḷtu muṭṭukiliraṇṭarai-k-kāṇam [| *] ellām muṭṭil ēḻaraikkāṇaṅ taṇṭap-
16. paṭuvatu [a]ṟaparaiyu .... tiyu[ṉā]ta[cci]ṉṉiṭṭatu [a]ttiyakkūḷi [ja]ya[ṉā]r-k-k[ko] ṭuppatu [| *]

17. tirukkoyilu . . . . teviṉālārāta[ṉai]muṭṭukiṟ paṅṅiraṇṭu kāṇaṅtaṇṭa-
18. ppaṭuvatu [| *] cāṅti . . . . . . yāṉum-i-t-taṉṭame pa[ṭu]vatu [| *] Cittirai
19. viṭutto[ṟu]ṅ kuṭiṅīr kuṭiccāṅti[pa] . . . .
20. karpaṅki[ḷa]ṅta perumāḷai pura[ḷai]yāl-i-
21. rupattaṟu[pa]laṅ caṅtaṉa taḷippuṟatti
22. laṅ kavara-p-peṟār [| *] i-k-kaccam piḷaikku
23. ṅ taḷiyārum-atikārarum vevveṟu irupa-
24. ttaiṅkaḷañcu cempoṉ-ṟaṇṭappaṭuvatu [| *] i-
25. t-taṇṭa[mi]ṭṭa[ṉ]ṟi-t-tam-m-atikārañceyya
26. p-peṟār * Kaliyukaṅ-ṅālāyirattu muppat-

10th: No. 6

SII, V, pp. 337-38

27th year of the reign of Kotai Ravi: c. 937 A.C.

First face

1. Svasti śrī [|| *] ko-kotai-
2. Iravikku-c-cellā
3. ṅiṉṟa yāṇtu irupa-
4. ttumūṉṟām-āṇṭai-
5. kk-etir ṅālām-āṇ-
6. ṭu Tirupparaṅko-
7. ṭṭu paraṭaimārum
8. pārpaṭṭārum ā-
9. ḷkoyilum potu-
10. vāḷum avirotattā-
11. l mukkālvaṭṭatti-
12. ruṅtu ceyta kacca-
13. m-āvatu [| *] paṭāraruṭai[1] ṅā-
14. ḷ paṅkiṉukkuṅ-ti-
15. ruccaṅtaṉattiṉuk-
16. kuṅ-tirup(pu)kaik-
17. kuṅ-tiruviḷakki-
18. ṉukkuṅ-ṅivedyat-
19. tiṉukkum oḷuk-
20. kavikkum paṭāra[rai]-
21. p-piṭippāṉuṅ-
22. tiruvakkiratti-
23. ṉukkum Mātirukka-
24. ḷ ṅivetti[ya]tti-
25. [ṉuyatti ṅā] ṇamirpati

Second face

26. ṉukkuṅ-Kaṇapa[ti]
27. yār ṅivedyamum
28. Srīkaraṇaikkuṅ-
29. kārilattu tiru-
30. kkoyil ṅivedya-
31. mum viḷakkuñ c[ā]-
32. ṅtiyuṅ-Ṅārāyaṇaṉa-
33. ṅki tirukkoyiṟ-
34. kamaiñca ceṉṉaṭai-
35. yuṅ-Kotai-Keyavaṅ-ti-
36. rukkoyiṟk-amaiñ-
37. ca ceṉṉaṭaiyum cā-
38. ṅtikkuṅ-tārai[k]-
39. kum Ayyaṉukkum
40. ittaṉaikkum amai-
41. ñca pūmi muṉṉam-amai-
42. ñcavaiyum piṉṉai a-
43. maiñcavaiyum i-p-
44. pūmi ittaṉaiyi[lu]-
45. m pukku vilakku-
46. vitum poruḷ kava[ruvi]-
47. tum pūkkuṉṟi . .
48. viṉañceyyum[2] ū-
49. [rā]ḷa[rum]potuvā[ḷum]
50. . . tuñ ceṉ ṉa . :

Third face

51. Perumāṉaṭikaṭkk-i[ru]-
52. [pa]ttaiṅ kaḷañcu[po]-
53. ṉṉum paṭṭu muṉṉa[m]
54. koyiṟku paṅti[ru]
55. kaḷaiñce añcu kā[ṉa]-
56. m poṉṉum paṭṭu Ta-
57. varaṅūr-k-kaccamum
58. piḷaiccu ūrkku-
59. m puṟamāvitu i-
60. ṅṅiccaṅaṭai it-
61. tanai-ilum muṭṭu ko-
62. ṇṭu avvavo ṅic-
63. [ca]ṅaṭaiye celuttu-
64. kilallat-itu koḷḷa-
65. -p-peṟār ceṉṉaṭai-
66. yā uḷḷa pūmi ko-
67. ṇtu oṟṟi vaikka-
68. vum oṟṟi koḷḷa-
69. vum peṟār [|*] koṭu[t]-
70. tavaṉ-ṟaṉ mutal ci-
71. māvāvitu Tiraṅ-
72. Kāṅtaṉ amaicca vi-
73. ḷakkiṉukk-amaiñ[ca]
74. tuṭaiyum ava-
75. ne koṭut. [ce yum-ū] rāḷaṉu-
76. [ṅ]koyilu . . . . .

Fourth face

77. ṉ kārāṇmai koṭut-
78. ta Kolavāyaṉum a
79. vaṉ caṅtatiyum-a
80. ṉṟi maṟṟorutta-
81. rkku kārāṇmai koṭu-
82. kkavum pāṭṭami-
83. ṭavuṅ kaikkūli
84. koḷḷaveṇṭum-eṉ-
85. ṉavum peṟār [|*] iva-
86. ṉum muṭṭikki-
87. l muṭṭiraṭṭi-
88. yoṭu koṭukka-k-ka-
89. ṭaviyar [| *] ūrāḷa-
90. ṉikkoyil māṉi-
91. ṭamāka potuvāḷāka i-
92. tiṉil virotik[ki]-
93. l-uccavattiyum pi-
94. ḷaiccu taṇṭamum paṭa-
95. k-kaṭaviyar[|*] tevaruṭaiya pata-
96. ṉāra maḷippitāka pūmi o-
97. ṟṟi vaippitāka ce [yyavu]-
98. m peṟār [|*] oṟṟi koḷḷavum pe-
99. ṟār [|*] i-t-tevarai-p-piḷaikkil
100. i-t-taṇṭamu ūrkaccamum-
101. muṗputtevaṭi . . . .
102. tu koṭātavararkaḷ i .
103. kaṉ veyava . . . .

1. p.r. *paṭārarutai ya.*
2. p.r. *vi ṅañceyyum.*

10th: No. 7
TAS, I, pp. 293-294

123rd year of the God at
Kaṇṭiyūr: A.C. 946

1. Svasti śrī [|| *] Tirukkaṇṭiyūr Mātēvar kku-c-cellā-
2. ṅiṉṟa yāṇṭu ṅūṟṟirupattumūṉṟu [|| *] i-vv-āṇṭu Kaṉṉi-
3. yil Viyāḷaṅṅiṉṟa [Tu]lāñyiṟṟu Kōṭikkuḷatti [l *] Iravi[ku]-
4. maraṉuṅ-TirukkuṅṟappōḷaṉRāmaṅtattaṉum paṇṭāra vāriya [t]-
5. tilum Vuyiril Kīrtti-Eṉāti taḷiyatikārattilum
6. iṭaṅāṭṭu Ṅārāyaṇañ-Caṅtiracēkaraṉamaicca tiruvakkirattiṉu
7. pūmi ci[ṟi]ya paṟaiyaṉkariyil aimpatiṉkalamum Puṉṉai-

8. ñāṟṟil ṅāloṉṟu Oṭṭaiyilōroṭiyiṟ pātiyum paraṭai ci-
9. ṟu ṅilatti [l *] kūṟum Ciṟumaṉaliṟ kūṟum Maṇvēlippuraiyiṭat-
10. til pātiyum Āññi[ṉi]kkālūḻa vērccaiyiloṉṟaṟai oṭiyu-
11. m Pālaippaḻañciyiṟ kūṟuṅ-Kaḻaṉikkaraiyiṟ pātiyuṅṅatāmaṉai-
12. ccēri-t-Tāmōtira-Nārāyāyaṉaṉ kārāṇmaicceytu patiṉāḷippaṟaiyāl mup-
13. pattu muppaṟai vittuṅ-kuttunel-iṭaṅkaḻiyāl muṅṅāḻiyum muṅṅū-
14. ṟṟaṟupatu, tēṅkāyum-irutulām puḻiyum iṭaṅkaḻiyāl ampatiṉāḻi
15. uppuṅ Kārttiyai ñāyiṟṟakam iṭa-k-kaṭaviyaṉ[|| *] Puḻaiyiṭai Maṇṇaṅ-Ko-
16. ṟṟaṉ puṟāyil mukkūṟuñ-Ciṟumutaivēli ūḻavēṟccaiyiṟ Kūṟuṅ-Tā-
17. maraippaḷḷi-k-Ku[ma *]ram Maṇiyaṉum Malliyaiccēri-k-Kaṇṭaṅ-Tēvaṉuṅ-kārāṇmaic-
18. ceytu muppattumuppaṟai vittuṅ-kuttuṅel muṅṅāḻiyum-iṭa-k-kaṭaviyar [|| *]
19. Iraññitāṟākiṉṟa pūmiyiliṭaṅkaḻiyāl-aiññāḻi ṅeykku paṟṟum-aḷavu
20. kārāṇmai-c-ceytu ṅeyyum-aḷakka-k-kaṭaviyaṇ Tāmaraippaḷḷi Kumaram Maṇi-
21. yaṉ[|| *] Vaṭavāymaṉaivaḷālum puraiyiṭamum Kaṇṭiyūril Puṉṉaicceri-ppu-
22. raiyiṭamu[m *] Aiyaṉārkāla[1]-p-puraiyiṭamum Vayalum Punnai-cceri Iyakkam-para-
23. meśvaraṉu[m*] Iyakkaṅ-keraḷaṉuṅ kārāṇmaicceytu muppattu muppa-ṟai muṅṅā-
24. ḻi vittiṭa-k-kaṭaviyar [|| *] muṭṭukil vittiṉu porum-aḷavu pūmiviṭa-k-kaṭa-
25. viyar[|| *] Ṅeytalmūkkil Vaḷḷōkkaṇṇārvēliyākiṉṟa pūmi Vayiramaṉai A-
26. kki Caruma-ṅārayaṇaṉuṅ-Ṅārāyaṇaṅ-koviṅtaṉuṅ-kārāṇmai-c-ceytu iṭaṅkaḻi-
27. yālaiññāḻi ṅey-
28. yum muppatiṉā-
29. ḻi-p-payaṟum aḷa-
30. kka-k-kaṭaviyar [|| *]
31. ṅey Pāliḻaperuṅ-
32. kālāyiravi Aiyaṉ-
33. ṟāyaṭi oḷḷatu kārāṇ[2]
34. maicceytu iṭaṅka-
35. ḻiyālaiññāḻi ṅeya-
36. ḷappitu[|| *] Kuṟṟik-
37. kāṭṭu Kāmañ-cattita-
38. ṉ kārāṇmaikku paṭi-
39. ñāyiṟu Paṟaiyaṉkari-
40. kkaṭutta kiḻakkil
41. oḷḷatu tāṉ kāṟāṇmai-
42. cceytu muppatti-
43. ruparai vittiṭak-
44. kaṭaviyaṉ[|| *] veḷ-
45. ḷittālam iraṇṭu [|| *]
46. vaṭṭakai iraṇṭu[|| *]

1. p.r. *Aiyaṉār kala*
2. *kārāṇmai maicceytu.*

10th: No. 8

TAS, V, p. 7 Kali 4051: A.C. 950

1. Svasti śrī [|| *] Kaliyukaṅ-tuṭaṅki ṅāāyirat[tu *] ampattorām-āṇṭu Tirukkaviyūr paṭṭāraka[r]kku Makiḻañceri-t-Tevaṉ-Ceṅṅaṉ tiruviḷakkuṅ-tiruvamirutuṅ-tiruvakkiramuṅ-tiruccaṅṅaṇamun-tiruppukaiyum-amaccāṉ [|| *] viḷkkiṉukku uri ṅeyyum iruṅāḻi ari-t-tiruvamirtum pukaiyaramaṉṉiṉāṟ celvitu [|| *] Tevaṉ-ceṅṅaṉ-amaicca kārāḷarāṟ celitticcu koḷḷa-k-kaṭaviyar [|| *]

2. ūrāḷa Ceṅṅaṉkari tiruvakkirattiṉṉu kuṭikūṟu caṅtaṉattiṉṉu pukaikku Ciṟupuṉayiltalai Cāttaṉ kūṟu amaiccāṉ [|| *] Mūḻikkaḷattu kaccattoṭokkum [|| *]

10th: No. 9

TAS, V, p. 6 Kali 4052: A.C. 951

1. Svasti śrī [|| *] Kaliyukam tuṭaṅki ṅālāyirattu aympattirām-āṇṭu Kaviyūr ūrār avirotattāl mukkālvaṭṭattu-k-kūṭi koyilumuḷḷirukka Maṅṅalattu Nārāyaṇaṅ-keyavaṉ Kiṭaṅkupaṟāluḷ Tilamaṅṅalattoṭiyum Eṭṭikkariyil añpatiṉ kalamuṅ koṭuttāṉ[| *] Maṅṅalattu Ṅārāyaṇaṅ-kiriṭṭaṉ koṭutta pūmi Kumārakkoṟṟakkari ṅūṟṟukalamum Īrai iḷākai [ṅeṭṭoṭiyil ṅāloṉṟum Īraikku Iḷāttūkku] avakaḷiṭaikkoṇṭa aimpatiṉ kalamum Tirukkaviyūr-t-tevarkku iraṇṭuṅaṅtāviḷakkum akattu paṅtiraṭikku ṅāṅāḻiyari tiruvamirtum uccikku ṅāḻiyari tiruvakkiram-iraṇṭukalamum-ippūmiyāl-iruvarum

2. amaiccār [| *] iccelavum iccelaviṉukku amaicca pūmiyum vilakkappeṟār [| *] vilakkum-ūrāḷar vevveṟṟu vakaiyāl perumāḷkku aimpattiru kaḷaiñcu poṉ taṇṭappaṭuvatu [| *] ṅāṭuvāḷumavarkku irupattaiṅkaḷaiñcu poṉ taṇṭappaṭuvatu [| *] tāṉamum paraṭaiyum-m-ūrāṇmaikkum-iṭaiyiṭuṅ-keṭṭu Mūḻikkaḷattoḻukkappaṭṭi kaccam piḷaiccārāvatu [| *] vilakkumavakaḷkk-aṉupaṅtam paṟaiyumavakaḷum i-t-taṇṭame paṭuvatu [| *] ūrār-avirotattāl-k-kūṭiyum-i-c-celavu maṟṟoṉṟiṉukku celuttikka-p-peṟār [| *] i-c-celavellām-oṭṭitteyakālattu celuttākkāl muṭṭiraṭṭi celutta-k-kaṭaviyar [| *] i-p-pūmi ellām Uḷavumaṅkalattavakaḷ taṅtatiyil mūttoriruvarum Ciṟaikkaraiyil mūttavaṉuṅ-kūṭi aṭuttu palam mukkālvaṭṭattu koṭup-

3. pikka-k-kaṭaviyar [|| *]

10th: No. 10

TAS, III, pp. 190-91 c. 961 A.C.

1. Svasti śrī [|| *] kō-śrī-v- Iṅtu-Kotaikku-c-cellāṅinṟa yāṇṭu aiyyāmāṇtaikk-etirām-āṇṭu Tiru-
2. kkaḻattappaṉuṭaiya śrīkāriyañceyta pariyāvatu [|| *] akattirupattaiyyaṭiyil muṉṉe tiruvamirtu ceyya-k-
3. kaṭaviyar [|| *] akatt-aiyyaṭiyil muṉṉe tiruvamirtiṉṉ-ari ārātikkum-emperumāṉkāṇa śrīmaṇṭapattuḷvaicc-aḷavu-
4. koṭukka-k-kaṭaviyar [|| *] ucci akame tiruvamirtu ceyvikka-k-kaṭaviyar [|| *] ṅivettiyam viṭuppitāvi-
5. tu uttamākkirattiṉu cāttirarai yeṟṟikkoṇṭu [|| *] aṅti-t-tiruvamirtu uccitiriññu irupati-
6. ṟṟaṭikku ari aḷakka kaṭaviyar [|| *] aṅtiyiṉ muṉṉe[1] tiruvamirtu ceyvikkavum kaṭaviyar [|| *]
7. attāḻattiruvamirtiṉum aṅtiyiṉ muṉṉe[1] ari aḷakka-k-kaṭaviyar [|| *] tiruviḷakkiṉ eṇṇai em-
8. perumāṉai-k-kāṭ. . . [2]

1. p.r. '*muṉṉai*' cf. *muṉṉe* in lines 2 and 3. In all these instances the last letter is identically shaped. *ṉai* has a slightly different shape as is seen in line 8.
2. Incomplete.

10th: No. 11

TAS, III, pp. 170-71 c. 965 A.C.

1. Svasti śrī [||*] ko-v-Iṅteśvaraṅ-kotaikku-c-cellāṅiṉṟa yā-
2. ṇṭu a[y*]yāmāṇṭaikketir-aiyāmāṇṭu Miṉattil Viyā-
3. ḷaṅṅiṉṟa Meṭañāyiṟṟu-c-ceyta karumam-āvatu[|| *] Tiru-
4. kkāḻkkarai paṭṭārarkku-c-Catiracikāmaṇi-y-āyiṉa
5. kiḻāyaṭikaḷ amaicca veḷḷi ṅaṅtāviḷakk-oṉṟu [|| *] itiṉukku ṅica-
6. l araikkāṇaṅ karuppuraṅ-tiriyiliṭṭerikka-k-kaṭavar [|| *] ivar amaicca
7. tiru vakkiram-iraṇṭu [|| *] tamperumāṭṭiyār amaicca ṅaṅtāviḷakk-oṉṟu [|| *] vi-
8. rutulaṅ-ṅe[y]yuṅ kayyu puḷiyum oru teṅkāyum kaṟiyum uppum kūṭa u-c
9. cai-t-tiruppaliyiṉmuṉṉai-y-amirtu ceyviykka kaṭavar [|| *] i-c-cela-
10. viṉṉ-amaiñña pūmi-y-āvatu [|| *] Peruvayal pūmiyum pulaiya-
11. ruṅ-Kaṇṇaikālāyuṭaiyār poṭṭaiyuṅ taccaṉār poṭṭai-
12. yum Vaṭṭappoṭṭaiyiṟ kaṭaṉu meloṭiyuṅ-kūṭa ā-[1]
13. ṭṭu ṅālppattirukalaṅ-ṅel pora-k-kuṭuttār paṭāra atikā-
14. rikaḷ [|| *] i-ṅ-ṅl porākkāl kuṟaiññatiṭṭu celitta-k-ka-

15. ṭavar paṭāra atikārikaḷ [|| *] i-p-pūmi pāṭṭamāṇṭu muṭṭiraṭṭi-
16. yum-aṭiyańtaramuń-tirttu celutta-k-kaṭavar [|| *] i-t-tiruvārāti-
17. ṉai oruńāḷ muṭṭukil iraṉṭarai-k-kāṇa[m *] poṉ taṇṭam vaicca ce-
18. lutta kaṭavaṉ uḷpāṭaṉ [|| *]

10th: No. 12

TAS, III, pp. 166-67 c. 971 A.C.

1. Svasti śrī * ko-v-Iṅtu-kotaivaṉmaṟ tiruvaṭikku-c-cellā-ńiṉṟa yāṇṭu patiṉorāmāṇṭaikk-etir ayyām-āṇṭu Ciṅkattuḷ Viyāḷań-ńiṟka-c-ceyta karumamāvatu [|| *] Tirukkāl-kkaraińāṭuṭaiya Kaṇṇam-puṟaiyan Vāykkālcciṟaikku mel Iṭaicciṟaikku kiḻum Veṭṭikkarikkāṭṭukk-oḷḷa pūmiyum Puṉai va re yum kūṭa Tiṟukkālkkarai paṭṭāṟakar tiruvaṭikku aṭṭikkūṭuttāṉ Kālkkaraińāṭuṭaiya Kaṇṇam Pu-

2. ṟaiyaṉ [|| *] i-p-pūmi meṟpātiyum . . . . . paṇiyuṅkoṇṭu Kaṇṇam-puṟaiyaṉ tāṉ-amaicca celavāvo [|| *] pańtiraṇṭu kalam tiruvakkiramum [|| *] Māyi Makattiṉāḷ cuṟṟumāṭaṅkūṭa ārātiṉaikku patiṉ kaḷaññu poṉṉu [m *] Kaṟkaṭaka ñāyiṟuto [ṟuń] ńiyati iṭaṅkaḷiyāl patināḷi arikoṇṭu kañciyuñ-celutta-k-kaṭaviyar-atikārikaḷ [|| *] maṟṟai-p-pātikkum Meṟṟali-p-Poḷań-kumaraṉ-amacca akkira[m*] mūṉṟu kalam ńańtāviḷakkoṉṟu [| *] Ūrań Ñakkań-keraḷaṉamacca akkira[m *] oṉṟu [| *] Ūrań-Kaṇṭa[ṉ *]-ceń [ta *]ṉamac-

3. ca akkira[m *] oṉṟu [| *] Vaṉṟalaceri Ko[tai] Iravi-y-amaicca ńańtāviḷakkoṉṟum tiruvakkiram veḷḷittālamum vaṭṭakaiyum kūṭa oṉṟu [| *] Meṟṟaḷi-c-Ciṅ[ka *]ppirāṉ-kumaraṉ-amaicca tiruvakkiram veḷḷittālamum vaṭṭakaiyum kūṭa oṉṟum [| *] Ūrań-Kumarañcāmi-kaṇṇaṉamacca akkira[m*] oṉṟum [|*] i-vv-oṉpatum ńańtāviḷakk-iraṇṭu[m*] Kaṇṇam-puṟaiyaṉ-amacca akkiram pańtiraṇṭu[m*] cuṟṟuviḷakku[m*] kañciyum Kāṭṭeṭṭikkarikkoṭṭāl celutta-k-ka-

4. ṭaviyar-atikāri kaḷ [||*] i-p-pūmi māvaṟakkoṇṭu mutalaṟa aṭṭi kuṭuttāṉ Kālkkaraińāṭuṭaiya Kaṇṇam-puṟaiyaṉ [||*] kalluń-kariṭum kāññirakkuṟṟiyu-muḷḷu mu[yiṟu]m-āka (ka) -v-amaiyum Veṭṭikkarikkāṭṭiṉoḷḷa pūmi evvakaipaṭṭatum-uḷḷoṭuńa aṭṭi-k-kuṭuttāṉ Kaṇṇam-puṟaiyaṉ [||*] i-c-celavu muṭṭukil muṭṭiraṭṭi celutta kaṭaviyan pāṭṭamāḷaṉ[|| *]i-p-pūmi ńāṭuvāḷum-avakaḷ payara-p-peṟār [|*] payarumavaṉai amaccuḷḷu maṟṟa koyilatikārikaḷkku[ńū]ṟ[ṟa] kaḷañcu poṉ-ṟaṇṭam paṭa-k-kaṭaviyar [|*] i-p-pi-

5. mi ńāṭuvāḷumavakaḷāka avakaḷkku cārńńavaraḷāka pāṭṭamāḷa-p-peṟār * ivakaḷum a-t-taṇṭame paṭakkaṭaviyar [|| *] itaṟku i-p-pari aṟiyum cātukkaḷ Aṭṭāṉikoṭṭattu Tevañcāttaṉum Iḷańturutti Keraḷa-ńārāyaṇaṉu

Peruṅtoṭṭattu Kaṇṭa-ṅārāyaṇaṉum Puṟamputaiya Keraḷañ-cirikumā-[ra*] ṉum Kuppevāḷkkai Kaṇṭa-ṅārāyaṇaṉum Paṟamputaiya Kumara-ṅārāyaṇaṉum Cirayaṉkoṭṭ-Iravi-vātutevaṉum Maṉṟitturitti Kaṇṇam-poḷaṉum Veṇṭalamaṉ Kaṇṇaṅ-kumaraṉum Kiḷakattu Koṟṟam-puṟaiyaṉuṅ-Kuṟṟiyūruṭaiya Kaṇṭam-puṟaiyaṉum Ūraṅ-Kottaṅ-kotaiyu-

6. m . . . . . Iravi-kotaiyum Kulacekarapaṭṭiṉattu Māṟaṅ-Koviṅtaṉum Ūraṅ-Kaṇṇañ-cirikaṇṭaṉum Ūram Kumaraṉ Cirikaṇṭaṉum Ūraṅ Poḷa-ṅāraṇaṉum Veḷḷiyāṉpaḷḷi-p-[1] Poḷañ-cāttaṉum Puḷḷipaḷḷi-c-Caṅkaraṅ-kumaraṉum aṟivār[||*] ivakaḷ veṇṭa-k-keṭṭu-k-keḷppiccu kaiyyeḻuti aṟiveṉ Kummaṉkoṭṭu Iravi-kuṉṟappoḷaṉeṉ [||*] i-p-pūmi Kā[ḷ]kkarai-ṅāṭṭ-ūrāḷar iraḷccikka-k-kaṭavar [|*] iṟakkāpokam āṭṭu Karkaṭaka-ñāyiṟṟu Makattiṉāḷ iṭaṅkaḻiyāl ṅūṟṟu ṅāḻi arikoṇṭu ūṭṭa-kaṭaviyar [|*]

7. uḷpāṭaṉum perumutiyaṉu[m*] ūṭṭātoḻivārāyiṉ pūmi taṭuttu vaccu uṇṇa-k-kaṭaviyar [|*] tevarkku añña . . kkiṟā . . ṇaṅtirttu koṭukka-k-Kaṭaviyaṅ-Taccaṅāṭṭurāḷar aṉṟu cellappoti paṅtiraṇṭu kāṇam poṉ tevarkku taṇṭampaṭa-k-kaṭa viyar [||*] Tirumāl aṟaippirāṭṭi amaicca akkiram oṉṟu [|*] itu-Veṭṭikkari-kkāṭṭiṉmeṟ celvitu [||*] Veṭṭikkarik-kāṭṭiṉmeluḷḷa celavu muṭṭikkumavaṉ Muḻikkaḷa-k-kaccam [|*]

1. p.r. *Veḷḷiyāṉpaḷḷi Poḷaṉ.*

10th: No. 13

TAS, IV, pp. 9-10 Ko. 149: A.C. 974

First side

1. Svasti śrī [||*] Kollaṅtoṉṟi ṅūṟṟuṅāṟpattoṉpatām-āṇṭu Tulā-
2. ttuḷ Viyāḻa[ṉ*] ṅiṉṟa Miriccikañāyiṟṟu ñāyiṟāṇṭa
3. Accuvati i-ṅ-ṅāḷāl Kollattu Paṉaiṅkāviṉ koyiluḷ-uya-
4. riya koṭṭiluḷ Tirucceṅkuṉṟūṟ-p-paruṭai-p-perumakkaḷ kūṭṭa-
5. ṅkūṭi iruṅtaruḷiyeṭattu vaiccu Tirukkalaiyapuratt-Āticcaṉumaiyammai
6. Ayururiṟ piratiṭṭai ceyta paṭṭārakaraiyum paṭṭārakarkkoḷḷa pūmiyum Āti-
7. ccaṉ-umaiyammaikku ṅiroṭṭikkoṭuttāṉ Veṇāṭuṭaiya Śrīvalla-paṅkotai [|*] Ātic-
8. caṉumaiyammai tāṉ-aṭṭiṟperu koṇṭatu Tirucceṅkuṉṟūr-p-paṭṭāraka-
9. rkku kiḻiṭāy-c-Ciṟṟūr ṅaṭaiyoṭukūṭa ṅāṉāḻi-c-ceyt-ari tiruvamuti-
10. ṉukkum oṉpatiṉāḻi-p-paṟaiyāl iruṅūṟu paṟai-c-ceytu ṅel āṇṭu-
11. varai koṭuppitāka-p-potuvāḷ kaiyyil ṅiroṭṭikkoṭuttāḷ [|| *] Ayurūr mu-
12. kkālvaṭṭamum paṭṭāra[r*] kkoḷḷa iṭaiyiṭum rakṣiccukoṭuttu rakṣāpōkaṅ-
13. koḷḷa-k-kaṭaviyar potuvāḷmār [||*] ipparicu ceyta kiḻiṭṭil ūrāḷarāka i-
14. ṭaiyiṭarāka pukku vilakkavum poruḷ kavaravum peṟār [||*] itaṉai piṉoṉṟu

Second side

15. ceyyumavaṉ vevveṟṟuvakai-c-Ciṟṟūrṅaṭai-t-taṇṭam iruṅūṟṟu-k-kaḻaiñcu
16. poṉ taṇṭappaṭa-k-kaṭaviyaṉ [||*] avaṉku pāṭutāṅkumavaṉum ippari-
17. ce taṇṭappaṭuvitu [||*] ipparicu meṟcollappaṭṭa Ayurur mukkā-
18. -lvaṭṭamum paṭṭārakarkkoḷḷa iṭaiyituñ Śrīvallapaṅ-kotaiyuṭai
19. Āticcaṉ-umaiyammai aṭṭipperu koṇṭatu Śrīvallapaṅkotaiyuṭa-
20. ṉirukka-t-Tiruccenkuṉṟūr-p-paṭṭārakarkku kiḻiṭākā aṭṭiye-
21. ṭatt-aṟiyuñ-cātukkaḷ [|*] Muruṅṅaiyūr-t-Tevam-pavittiraṉ ṅāṉum-aṟi-
22. vaṉ [|*] Iṭaiyāmaṉattu Caṅṅaraṅ-kaṇṭaṉ ṅāṉum-aṟivaṉ [| *] Maṇal-
mūkkiṉ
23. Kaṇṭaṅ-Tāmotaraṉ ṅāṉum-aṟivaṉ [|*] Veṇāṭṭiṉku atikārañceyki-
24. ṉṟa Puṉalūr Iravi-paraṅtavaṉ ṅāṉum-aṟivaṉ [| *] Kuṭakoṭṭūr-p-paraṅ-
25. tavaṅ-kaṇṭaṉ ṅāṉum-aṟivaṉ [|| *] ivai Tiruccenkuṉṟūr-p-potuvā-
26. ḷ Cāttaṅ-caṭaiyaṉ-eḻuttu [|| *]

11th: No. 1

TAS, V, p. 179. c. 1004 A.C.

1. Svasti śrī [| *] ko-Pāṟkaraṉiravivarmmar tiruvaṭikku-c-cellāṅiṉṟa yaṉ-ṭiraṇṭiṉetir irupattuṅālām-āṇṭu Veṇāṭuṭaiya Kovarttaṉamā[rt]tāṇ taṉ Naṉṟuḷaṅāṭu vāḷa-t-[Tirukkaṭi]ttāṉattu
2. pariṭaiyuṅ Kaṇattārum potuvāḷmāru[m *] Naṉṟuḷaṅā[ṭ]ṭu muṅṅūṟṟu-varum paṇi ceykiṉṟa Ṅeṭumpuṟattu Kuṉṟaṅ-koviṅtaṉum Ūma maṉṟatt-Iravi-y-irāmaṉuṅ kūṭi . . . . . kaccamāvitu [|| *] Tirukkaṭittāṉattu
3. tirukkoyiluṭaiyāruṅ-koṭṭikaḷuṭaiya virutti oṟṟi koḷḷavum avai-y-uḷavu uḷavum perār [| *] ūrāḷarum iṭaiyiṭarum potu-āḷum oṟṟikoḷ[ḷumavaṉ] . . . yumavaṉ ṅāṭuvāḷum-avarkku i-
4. rupattu ṅāṟkkaḷaiñum vāḷkkai uṭaiyavarkku paṅtirukaḷaiñu poṉṉuṅ-taṇṭappaṭuvitu [| *] avaṉku pāṭutāṅkumavaṉum i-t-taṇṭame paṭu-vitu [| *] paṇimāṉiṭam oṟṟi . . . . iṭaiyiṭu kūṭi-y-iru kūṭi . . . . .kku vātic-
5. corkku uḷavaṭuttu koḷḷa-k-kaṭavar [| *] atu vilakkumavaraḷum i-t-taṇ-ṭame paṭuvitu [| *] paṇimāṉiṭattai-p-puḷḷikiḷ-amaiña vaṇṇame kaṇattā-ruñ-cāṅticeyyumavaraḷuṅ-kaṇṭu-koḷvitu [| *] uvaccakaḷ
6. eḻutitu [|| *]

11th: No. 2

TAS, II, p. 41 c. 1004 A.C.

1. Śrī [|| *] iraṇṭām-āṇṭiṉetir irupattuṅālām-āṇṭai-k-Kaṉṉi ñāyiṟu mutal
2. āṇṭuvarai paṅkuṉi uttirattiṉāḷ uccaiyiṉ muṉṉe iraṇṭu pa[ṭai?]
3. vu[1] eṉṉai āy-aṭṭa-k-kaṭaviyar tirukkoyiluṭaiya Nārāyaṇa-maṅkalatt-ira-

1. p.r. a?

4. ṇṭu kūṟṟārum [|| *] itu muṭṭukil muṭṭiccavan muṭṭiraṭṭi āṭṭuvitu-
5. ñ-cey[va?]tu [|| *] ṅāṭuvāḷumavaraṭkku aṟukaḷaiñu ponnuṅ-taṇṭap-
paṭuvitu [|| *] muṭṭiya e-
6. ṇṇaiyiṟpāti pariṭaimār koḷvitu [|| *]

11th: No. 3

TAS, II, p. 44 c. 1011 A.C.

1. Svasti śrī [|| *] kō-nōyinmaikoṇṭān kō-c-ciri Pākkaran-Iravivarmatiru-vaṭikku-c-cellāṅinṟa yāṇṭu iraṇṭāmāṇṭaikk-etir mup-
2. pattōrām-āṇṭu Peruṅeytal ūrum paraṭaiyārum potuvāḷuṅkūṭi Iṭapattil Viyāḷaṅṅi[ṉ]ṟa-v-āṇṭu iṭaṅkaḷiyāl enpa-
3. tin kalaṅṅel Nanṟuḷe ṅāṭṭinu āṭṭaikkōḷāka koṭuppānamaiññār-amaicuḷḷu-ṟuti[1] [|| *] kōyilatikārikāḷkku itu koṭuttu maṟṟeppon-[2]
4. paṭṭatuṅ-koṭukka-[k-ka*] ṭamai-y-illai [||*] itu tirumukaṅ-kāṭṭikkoḷḷa-k-kaṭaviyar-enṟu aruḷi-c-ceykaiyāl-k-kōyilatikārikaḷāy vaṅṅiruṅtu kallin-
5. mēl-k-kāṭṭiccōr Veḷḷūr-Iravi-kaṇṇiyuṅ-Kūḷamaṅṅalattu Śrīkumāra-ṅārāyaṇanum [||*]

1. p.r. *amaiccuḷḷu[ṅ]ta*. The *ru* and *ti* are clear enough.
2. The Editor suggests '*maṟṟepperppaṭṭatu*

11th: No. 4

SII, VII, p. 75 c. 1015 A.C.

1. Svasti Śrī [||*] ko-p-Pākkara-Iravivarmar tiruvaṭikku cellāṅinṟa iyāṇṭu muppattaiṅ . .
2. . . . . . ṭu Mā[ka]ḷūr karā . ṅ Kecavan palikkal paṟṟiccu ṅāḷi [ari] amaccu [||*]

11th: No. 5

EI, III, pp. 68-69 c. 1016 A.C.

First plate: first side

1. Svasti śrī [||*] kōkōnmai koṇṭān kō-śrī-Pārkaran
2. Iravivanmar tiruvaṭi pala ṅūṟāyira-
3. ttāṇṭum ceṅkōl ṅaṭatti-y-āḷāṅinṟa yāṇ-
4. ṭu iraṇṭām-āṇṭaikk-etir muppattāṟām-āṇṭu Mu-
5. yirikkōṭṭu iruṅtaruḷiya ṅāḷ pirasāticcaru-
6. ḷiya pirasātam-āvatu [||*] Īssuppukku Irappānukku
7. añcuvaṇṇamum peṭiyālum vāyanttālu-
8. m pākuṭamum añcuvaṇṇappērum pakalvi-
9. ḷakkum pāvāṭaiyum aṅtōḷakamum kuṭaiyum

First plate : second side

10. vaṭukeppaṟaiyu-makākāḷamum iṭupaṭiyum tōṟaṇamum tō-
11. raṇa-vitāṉamum mikkum eḻupattiraṇṭu viṭu-
12. pēṟum kūṭa-k-koṭuttōm [|*] ulakuṅ-tulākkūliyu-
13. m viṭṭōm [|*] maṟṟum ṅakarattil kuṭikaḷ kōyilkku
14. iṟukkumatu ivaṉ iṟāmaiyum peṟumatu peṟavum
15. āka-c-ceppēṭṭōṭum ceytu koṭuttōm [|*] añcuvaṇṇa-
16. m uṭaiyu Issuppu-Irappāṉukkum ivaṉ saṅtati āṇ-
17. makkaḷkkum peṇ-makkaḷkkum ivaṉ marumakkaḷkku-
18. m peṇ-makkaḷai koṇṭa marumakkaḷkkum saṅtatippira-
19. kiriti ulakum caṅtiraṉum uḷḷaḷavum añcuvaṇṇam sa-

Second plate

20. ṅtatippirakiriti [|*] śrī [||*] ippari aṟivēṉ Vēṇāṭu-
21. ṭaiya Kōvarttaṉa-Māttāṇṭaṉ [|*] ippari aṟivēṉ Vēṇ[ā]-
22. paliṅāṭuṭaiya Kōtai-cirikaṇṭaṉ [|*] ippari aṟivē-
23. ṉ Ēṟāḷaṅāṭuṭaiya Māṉavēpala-māṉaviyaṉ [|*] ippari
24. aṟivēṉ Vaḷḷuvaṅāṭuṭaiya Irāyarañ-cāttaṉ [|*] ippa-
25 ri aṟivēn Neṭumpuṟaiyūṟṅāṭuṭaiya Kotai-y-iravi [|*] i-
26. ppari aṟivēṉ kiḻppaṭaiṅāyakam ceyyiṉṟa Mūrkka-
27. ñ-cāttaṉ ||*] Vaṉṟalaiceri-Kaṇṭaṉ Kuṉṟappōḷaṉ-āya kiḻ-
28. vāy-k-kēḷppāṉ-eḻuttu [||*]

11th: No. 6

EI, XVI, pp. 343-44 c. 1021 A.C.

1. Svasti śrī [||*] kō-śrī-Pārkkaraṉ-Iravivarmmaṉ-tiruvaṭikku-c-cellā (ṅ) ṅiṉṟa iraṇṭām-āṇ-
2. ṭaikk-etir muppattaiyām-āṇṭaikk-etir-āṟām-āṇṭ [u] Tulāttil-v-Viyāḻaṅ-ṅiṉṟa Miṉa-ñāyiṟu
3. eṭṭu ceṉṟa Putaṉ-āṇṭa uttiratti-ṉāḷ Tiruṅelli mukkāl-vaṭṭattu niṉṟu ceyta kāriyam-āvatu [| *] Ti-
4. ruṅelli-p-perumāḷkku ṅiyatam paṅtira[ṭi*]kku ari muṉṉā-ṅāḻiyāl aṟu-ṉāḻi oru ṅaṅtā-
5. viḷa[k*]ku (tā) amaiccāṉ Ki[ḷ*]kkāṭṭiy-p-Pōḷaccērikkāl aṭṭikkuṭuttāṉ mūttakūṟuvāḷiṉṟa
6. Kuñcikuṭṭavarmaṉ-āyiṉa aṭikaḷ Vīra-Kuṟumpuṟaiyār-tiruvaṭi aṭṭik-kuṭu-
7. tt-aruḷiyār [||*] mūttakūṟṟil eḻuṅūṟṟuvarum paṇiyuṭaiya ṅāyaṉum ūru[m*] ūriṭa

8. vakai Veḷḷāḷarum Kuṟumpuṟayiṉāṭu mūttakūṟṟiṉukk-amaiñca ṅiḻalum paṉi-
9. yuṅ-ṅāṭum-iṭavakaiyu[m*] pirakitiyum uṭaṉ-kūṭi-ṅiṉṟ-avirotam-āy Tiruṅel-
10. li-p-perumāḷkku ṅiyatam akattu-paṅtīrati-tiruvamirtiṉukkum oru ṅaṅtā-
11. viḷakkiṉuṅ-Kiḻkkāṭṭiy-p-Pōḻaccērikkāl-aṭṭikkuṭuttitu [|| *] ari muṉṉā-ṅā-
12. ḻiyāl-aṟuṉāḻiyālum pāti pirāmmaṉar ami[r]ti-ceyvitu [|| *] pāti-c-cō-
13. ṟu-(ṅ)ṅīrāṭṭupaḷḷikku [pañ]camāsaptaṅ-koṭṭi uvaccakaḷ koḷvitu [|| *] i-c-cep-
14. pēṭṭil-p-paṭṭa-y-ilēkaiyiṉāl ēṟṟu[k*]koṇṭa puruḻarāvor Tiruṅelli-

Second side

15. pura Nārāyaṇaṉ-vāsutēvaṉ-āyiṉa Nelkkuṉṟaṭikaḷum Nellamam Nārāyaṇa-
16. ṉ Tiruṅelli-t-tāḻvāriyaṉu pirakitiyum Tiruṅelli mukkāl-vaṭṭatt-amai-
17. ñca patipātamūlamāti ivarkaḷ kaiyyil-aṭṭikkuṭuttāṉ Kuñcikuṭṭavarm-maṉ-āyi-
18. ṉa Vira-k-Kuṟumpuṟai Kiḻkkāṭṭiy-p-Pōḻaccērikkāl [||*] i-c-cērikkāl taṉ-ññātikaḷkku
19. yōkikaḷkku śrī-vaiṣṇavarkkuṅ-kīḻīṭāka koṭuttitu [||*] i-c-celaviṉukku iṭaiyūṟu paṟai-
20. ññu muṭṭikku[m *] avaṉ āṟarai-k-kāṇa[m *] poṉṟaṇṭam perumāḷ paṇṭārat [t *]il vaiccu muṭṭiraṭṭi tiruvami-
21. rtum ṅuṅtāviḷakku[m*] vaippiccu mukkālvaṭṭattu cella-k-kaṭavaṉ [||*] itakkaṟivu Āṟūr-k-Kuññi-
22. [vi *]kkiramaṉ-ākiya atikāraṉum Amaiyamaṅṅalattu Yākkaṉ-cātta-nākiya paṭai-uḷtuṉum (?) Kiḷiyā-
23. [ṟ*]ṟu Tulāvilli Ayyaṉu[m*] Kāyumaṇ Māyiṇaṅ-Kaṇṭaṉum Maṇaṅ-ṅāṭṭu Kaṇṭaṉ-kēṟiḷaṉum Kaṇṇaṉūr Īrāmaṉ-ku-
24. ññiyu[m *] aṟivar [|| *] Kuṟu[m*]puṟaiyiṉāṭṭu Maiṉāyaṉ Iravi-y-irāmaṉ ēvalāḷā[y*] kaiyyeḻuti aṟivēṉ Vālicē-
25. ri-k-Kaṇapati-ṅīlakaṇṭaṉ-āyiṉa Kuṟumpuṟai-p-peruṅ-taṭṭāṉ-eḻuttu [||*] gō-prāhmaṇāṉā svastika[m] svasti
26. Tiruṅelli-p-perumāḷkku Kuṟumpuṟaiyiṅāṭu mūttakūṟuvāḻkiṉṟa Kuññi-kuṭṭavar-
27. mmaṉāyiṉa Vīra-k-Kurumpuṟaiyār koṭutta veḷḷi-pāṉaiyum v[e *]ḻḷi vāḻu[m] pa[ṟā]kaiyum mut-

28. tu-tāḻvaṭāmu[m*] eṉṉūṟṟu-eḻupatteṭṭu muttu ṅiyatam eṭuppitu[||*] cārttuvituñceyvata [||*]
29. Patevatevaiyamatōr [||*] [ōm] namō Ñārāyaṇāya namaḥ [||*]

11th: No. 7

TAS, V, pp. 174-75 Latter half of 11th century.

1. Svasti śrī [||*] ko Iravi-Irāmaṉukku cellāṅiṉṟa yāṇṭiraṇṭu itiṉṉ-etirām-āṇṭu Miṉattil Viyāḻaṅṅiṉṟa Karkkaṭakañāyiṟṟu Tirukkaṭittāṉatt-ūrārum paraṭaiyārum capaiyārum Naṉṟuḷa[1] ṅāṭu vāḻiṉṟa Maṇalmaṉṟatt-Iyakkañ-cirikaṇṭaṉum ivakaḷ mukkālvaṭṭattu avirotattāl-k-kūṭi-c-ceyta kāriyam-āvatu [||*] paṭāraruṭaiya paṇṭāram keṭṭa Teṉceri-c-Ceṅṅaṅ-tāyaṉuṭaiya iṭaiyiṭum avaṉ kuṭi iruṅṅa[2] puraiyiṭamu Ñāṟalvelikariyum Vaṭṭakkariyum Payiṟṟāṭṭiyākiṉṟa ṅilattil ivaṉṉuḷḷa kūṟum Tevaṉvāyp-palikkaṇattil avaṉṉuḷḷa paṭakāramum i-c-coṉṉa ṅilamum puraiyiṭamum Teṉceri-c-Ceṅṅaṅ-tāyaṉuṭaiya-y-iṭaiyiṭittaṉaiyum maṟṟum piṉuḷḷatellām uḷḷoṭuṅka ūrum paraṭaiyum sabhaiyum ivakaḷ tiruvuḷḷam avirotamākki uḷḷiruṅṅu Ñaṉṟuḷaṅāṭu vāḻiṉṟa Maṇalmaṉṟatt-Iyakkaṉ-śrīkaṇṭaṉ
2. pañcamāśabda amaiccāṉ amaicca paric-āvatu [||*] ṅirāṭṭupaḷḷikku ayvar koṭṭuvatu [||*] tiruppalikku ṅālvar koṭṭuvitu [|*] koṭṭātu puḷḷippaṭil-p-paṭṭavar muṅṅāḻi ṅāḻiyāl iruṅāḻicceytu ṅel taṇṭam-iṭuvitu [|*] mūṉṟuteśakālamum muṭṭukil i-vv-opāti-yāl eṟiṇa ṅel koṭuttu koṭṭuvitu [|*] oruṅāḷ tekiya muṭṭukil iṭaṅkaḻiyāl ṅāḻi eṉṉai tirumeṉimel-āṭṭuvitu [|*] āṭṭiṉa eṉṉaiyil-p-pātiyum puḷḷippaṭṭa ṅellum kiḻccāṅti-ceyyumavaṉ koḷvitu [|*] maṟṟoḻiñña eṉṉai tirukkoyiluṭaiyār koḷvitu [|*] i-p-paṇi ceyvāṉ amaiñña paṇimakkaḷ aṭuttu mūṉṟuṅāḷ muṭṭukil kiḻccāṅtiyuṭaiyavaṉ kiḻ amaiñña paricu koḷvitu [|*] palaṅāḷ aṭuttu muṭṭukil muṭṭiṉa aḷa[vu*] kaṇṭu ūrāḷar tirumeṉimel-āṭṭippitu * i-v-vaṇṇam amaicca pañcamā-śabdam vilakki muṭṭikkumavaṉum
3. itiṉukk-amaiñca pūmiyum puraiyiṭamum pattāyamum viṭuvvitāka [|*] pāṭutāṅṅuvitāka ceytavaṉum irukūṟu paṟaiyumavaṉum ūrāṉ-maikk-iṭaiyiṭuṅ-keṭṭu perumāṉaṭikaḷkku ṅūṟṟu-k-kaḻaññu poṉṉuṅ-Ñaṉṟuḷa-ṅāṭu vāḻuma[va*]rkku aympatiṉ kaḻaññum vāḻkkaivāḻumavaṉukku irupattaiṅ-kaḻaññu poṉ-ṟaṇṭappaṭuvitu [|*] ipparic-i-ṅ-ṅāṭu vāḻaṅṅa ṅāyarum muṅṅūṟṟuvarum paṇiyuṭaiyavakaḷum uḷḷiruṅtu i-k-kaccam eḻuticcitu [|*] paṇimakkaḷum itiṉukku varuṅ-tuppu vi[la*]kkiṉum varuvitu [|*] oyāyil ūrāḷare tirttu koṭuppitu [|*] ivakaḷil ākātavaṇṇam-irukkil ṅāṭuvāḻumavaraiyum muṅṅūṟṟuvarum paṇi uṭaiyavakaḷaiyum uruvaticcu avakaḷāl viṭṭiccu-k-koḷvitu [|*] itiṉukk-amaiñña ṅilam oṟṟivaikkavum koḷḷavum peṟār [||*] svasti śrī [||*]

1. p.r. *Naṉṟuḷai*. The plate has throughout only *Naṉṟuḷa*.
2. p.r. *iruṅta*

11th: No. 8

TAS, V, pp. 35-36 Latter half of the 11th century.

1. Svasti śrī [||*] Kaṉṉiyil Viyāḻaṅ-iṟ[ka*] Kaṉṉiñāyiṟṟu ñāyiṟ-Accuvati ṅāḷ Peruṅeytal mukkālvaṭṭatt-iruṅṅu tiṟunāḷkkaṇattārum potuvāḷum avirotattāl kūṭi-c-ceyta karumamāvatu [||*] i-t-tiruṅāḷkkaṇattārkku Ñāvalkkāṭṭu Etiraṅ-kaviraṉ Kaḷattiṉāloṭiyākiṉṟa pūmi iruṅūṟṟu-k-kalattiṉmelum Muññaṉāṭuvuṭaiya Āticcaṅ-kotaikku Etiraṅ-kaviraṉ koṭuttuṭaiya ṅel patiṉāḷipparaiyāl āyiram paṟaiyum viṟṟiraṭṭicca vaṇṇam patiṉāḷi-p-paṟaiyāl irāyiram paṟai ṅellum āṭṭā-

2. ṇṭum Kaṉṉiñāyiṟṟorum tiruṅākkaṇattāruṭaiya tiruvārātaṉattil āyiravar pirāmmaṇarai amirtu ceyvippitāka-t-tiruṅāḷkkaṇattār potuvāḷ kaiyyil-aṭṭi-k-koṭuttāṉ Etiraṅ-kaviraṉ [||*] i-t-tiruvārātaṉam pattuṅāḷilum Kaṉṉiñāyiṟṟamarapakṣattil pañcami tuṭaṅṅi ṅiyati ṅūṟu ṅūṟu māṉiṭattai amirtu caiyyiccu ārāṭṭa-k-kaṭavar āṭṭāṇṭum vāriyarum potuvāḷum Etiraṅ-kaviraṉum [||*] itara vaḷiyāl orottar orottar iraṭṭiraṭṭai kulai vāḻaikkāyum oro kulai vāḻaippaḻamum . . . .

3. ḻupatu pattu teṅkāyum orottoruttar-iraṭṭiraṇṭu kaṟiyum iruṅāḻicceyt-uppum irupalañceytu-puḷiyum aññāḻicceytu tayirum patiṉāḻicceytu mōrum koṇṭuvaṅṅu tattamakku paṭṭaṅāḷ koṇṭu vaṅṅu akattu panti-raṭiyil muṉṉey viḷāvāriyarum potuvāḷoṭukūṭa aḷavukoṭutt-amirtu ceyyikka-k-kaṭavar [||*] potuvāḷ-iruṅūṟu puḷikkaṟi koṇṭuvaṅṅu koṭukka kaṭavaṉ [||*] tiriññu paṅtiraṭiyil muṉṉe-y-amirtu ceyyiccu viḷāppali puṟappaṭa-k-kaṭavar vāriyarum potuvāḷum [||*] ilaiyum viṟakum-v-Uttiraviḷā-c-ceyyumavakaḷ koṇṭu . . . . . .

4. aṭikka kaṭavar [||*] i-p-paricey i-t-tiruviḷāviṅṅu Etiraṅkaviraṉ-amaicca celavu amaiññavaṇṇam muṭṭāte celutta-k-kāṭavar tiruṅāḷkkaṇattārum potuvāḷum [||*] ipparic-oṭṭiṉa kālattu muṭṭāte celuttātoḻivārākil amaic-cuḷḷuṟutta koyilatikārikku ṅūṟṟukkaḷaiññum ṅāṭuvāḷumavarkku paṅ-tiru kaḷaññu poṉ taṇṭa-p-paṭa kaṭavar [||*] iṭaiyiṭaṉ i-c-celaviṉu virotikkil i-t-taṇṭam po[ṉ*]ṉum paṭṭu tavaikkum paṅtiru kaḷaiññu poṉ taṇṭam vaiccu kāṭṭappeṟa-k-kaṭavaṉ [||*] tiruṅāḷkkaṇattā-

5. ruṭaiya kariyil-p-pukku vilakkumavarum poruḷkavarumavarum i taṇṭam paṭa-k-kaṭa-viyar [||*] i-v-amaiñña kaṟiyum muṭṭi-y-ūṉ-v-oṉṟu kuṟaiyi-lum koṇṭuvārāt-oḻiñña kaṇattāṉ iraṇṭarai-k-kāṇam poṉ taṇṭam vaiccu-k-koṇṭu aṭaikkāyamitum-iṭakkaṭaviyaṉ [||*] Kaḷattiṉāloṭi ṅellu Āticcaṅ-kotai taṅṅucellāṉākil muḷāvu tiruṅāḷkkaṇattārum potuvāḷum Etiraṅ-kaviraṉum kūṭi maṟṟoru pūmimel-iṭṭu Etiraṅ-kaviraṉai-k-koṇṭu kāraṇ-mai ceyyiccu āṇṭāṇṭum eṇṇāḻipparaiyāl-iruṅūṟu paṟai . . . .

6. ki arikarātitu koṭukka kaṭavan [||*] Etiraṅ-kaviranum taṅtatiyum i-p-pūmi kāraṇmaicceytu ṅellaḷappāṉāṟṟātoḻikil kaṇattārum potuvāḷum tāṅṅaḷey uḻutukoṇṭu celutta-k-kaṭavar [||*] Etiraṅ-kaviraṉum avaṉ peṇṇu piḷḷaiyum rakakikka-k-kaṭavar potuvāḷum kaṇattārum [||*] Etiraṅ-kaviraṉāka peṇṇum piḷḷaikkum taṅtatikkum-m-uṭaiya ....

12th: No. 1

TAS, V, pp. 38-40 Early 12th century

1. Svasti śrī [||*] irā-
2. māṇṭaikk-etir e-
3. ṭṭām-āṇṭu Kulai-
4. cekara koyilati-
5. kārikaḷ tiruvirā-
6. cciyañ-cellā-
7. ṉiṉṟa Karkkaṭakat-
8. til Viyāḷatti-
9. l Viriccika-
10. ñayiṟṟu ṅālu
11. taḷiyaiyuṅ-tiru-
12. kkuṉṟappoḷai-
13. yuṅ-kūṭṭi ko-
14. ṇṭu Neṭiyataḷi-
15. iruṅṅaruḷi Peru-
16. ṅeytal āṭṭaik-
17. koḷāl ṅālppa-
18. tiṉ kalaṅ-ṅel-
19. lum Peruṅeyta-
20. l araṅtaiyum a-
21. ṭṭilpeṟāy ti-
22. rukkai ṅaṉaicca-
23. ruḷiyār [|*] āṭṭaik-
24. koḷ ṅamakkāramum
25. māpāratamuṅ ti-
26. ruvuḷḷam paṇ-
27. ṇi-y-aruḷiyār a-
28. maicculluruti-[1]
29. y Kulaicekara ko-
30. yilatikārikaḷ [||*]

Second face

31. āṭṭaikkoḷ
32. ṅāṟpatiṉ kala-
33. mum araṅtaiyu-
34. m Peruṅeytal
35. ūrum potuvā-
36. ḷum aṭṭilpe-
37. ṟāy koṇṭār [||*] koyi-
38. latikārika-
39. ḷ Kāpālimaṅṅa-
40. lattum Muttū-
41. ṟṟum oḷḷa-
42. kuṭipatik-
43. ku tirumuka-
44. ṅ-tiruvuḷḷam
45. paṇṇi-k-Kāma-
46. kkāṉappaḷḷi
47. Irāmaṅ-tāya-
48. ṉum Kaṭammaṉ-
49. ṉāṭṭu Nārāya-
50. ṇa-ṅārāyaṇaṉum
51. ūrppotuvā-
52. ḷuṅ-kūṭi tiru-
53. mukam patiyuṟu-
54. tti [|*] iraṇṭūr-
55. k-kuṭipatiyu-
56. m Perṅeytal
57. mukkālva-
58. vaṭṭattu vaṅṅu

Third face

59. kūṭi a-
60. raṅtai a-
61. ṭikkuma-
62. toḻiñ-

63. ñomeṉ-
64. ṟu kal e-
65. ḻuti ńā-
66. ṭṭi-k-ko-
67. ṭuttār
68. tiruvuḷ-
69. ḷam paṇ-
70. ṇiyaruḷi-
71. ya mār-
72. kkame [||*]

1. p.r. amaiccuḷḷu patiya.

12th: No. 2

TAS, V, pp. 44-46 — Ko. 278: 1103 A.C.

Second face

1. Svasti śrī [|*]
2. Kollańto-
3. ṉṟi-y-iruńū-
4. ṟṟeḻupat-
5. t-eṭṭāmāṇ-
6. ṭai-k-Kaṉṉiyi-
7. l Viyāḻam puk-
8. ka [Ciṅṅa ñā]yiṟu-
9. oṉpatu ceṉ-
10. ṟa ńāḷ iraṇṭā-
11. māṇṭaikk-eti-
12. r pati[ńorā]m-āṇṭai-
13. [y I]rāmar tiruva-
14. ṭi koyilatikā-
15. rikaḷāyiṉa Śrīku-
16. lacekara-c-cakki-
17. ravarttikaḷ Ku-
18. rakkeṇi-k-Kolla-
19. ttu Paṉaiṅkāvi-
20. ṉ koyilakatti-
21. ruńńaruḷa āriya-
22. roṭu vańńa virota-
23. ttiṉu prāyaccit-
24. tattiṉu puttaṉ a-
25. ṟaiyāl patiṉāḻi-
26. kkoḷḷum paṟaiyā-
27. l ńiyatam oropa-
28. ṟai-c-ceytu ńel
29. Irāmec-
30. cuvarattu
31. . . . . . .
32. . . . . . .
33. . . . . āri-
34. ya brāhmaṇa-
35. ruṅ-kūṭi-
36. yiruńńaṭa-
37. ttu . . pakka-
38. l . . . . .
39. yakkaṅ-kai-
40. yil-t-ti-
41. rukkai ńa-
42. ṉaiccaruḷa
43. ńāṉku ta-
44. ḷiyum-ā-
45. yiram a-
46. ṟuńūṟṟu-
47. varum [i-ṉ-]
48. ṉāṭu vāḻk-
49. kaiyāṉ Vik-
50. kiramaṉāṉa
51. . . . . .
52. kkaṉ muta-
53. lāyuḷḷa
54. cāmańtaru-
55. ń-tirukkai-
56. kkiḻ-k-kū-

57. ṭiyirukka-
58. t-tirukkai
59. ṅaṉaicca ru-
60. ḷiyāvitu [| *]
61. a-c-ceri-
62. kkal kārā-
63. ṇmai ce-
64. ta Veṇāṭ-
65. ṭu Kumara-
66. ṉ-utaiyava-
67. rmmaṉ

Third face

68. i. . . . . . .
69. . . . .
70. aiṅṅāḻi koḻḻu-
71. m-iṭaṅkaḻiyāl mup-
72. pattaṟukala ṅel-l-ī-
73. rāmecurattu maṇṭa-
74. pattil [kūṭṭaṅ]-
75. kūṭi-y-iruṅṅatil
76. i-[vv-āṇṭu] mutal
77. tiru . . . . . vaikku-
78. m tirukkūttuṅ-
79. kūṭi-c-celvatu [|*]
80. Kiṟṟaṭiccuvarat-
81. tu meloṭitti . . . . . .
82. . lu ceṅṅel mu-
83. ppattaṟu kalam-
84. . . . . lippaṭi-
85. patiṉeṉ kala-
86. m ṅellāl ce-
87. laviṭuvitu [| *] vaicca
88. ṅel patiṉaiṅkala-
89. ttāl toḻḻāyira-
90. ṅāḻi Palākkāṭṭu Ka-
91. ṇṇaṅ-tevaṉ cela-
92. viṭuvitu [| *] toḻḻā-
93. yiraṅāḻi mel i-v-
94. v-ūr (vūr) cattipirama-
95. ñ-celaviṭuvitu [| *]
96. celavu muṭṭikiṉṟe
97. . . . . mayāl-aññā-
98. ḻi ari taṇṭapaṭṭu
99. celaviṭu vitu [| *] kārāḷa-
100. r mūvaruṅ-kūṭi Cerik-
101 .kal . . kārāḷarum tiru-
102. kkuṇavātatevar tiruṅa-
103. ṭaiyil koṇṭu aññāḻi-
104. kku okkum-iṭa[ṅ *]kaḻi
105. ṅāṅūṟṟu nāḻi nel-āṭ-
106. ṭai kārāḷaru cerikkal ko-
107. ṭuppatu [|*]y-ivaṇṇa [ma *]mai-
108. cca-amaikku . . . ku-
109. ṇavāyiraṉum-y-ikkaṭai

Fourth face

110. kaṭamaiyā-
111. l . . .
112. tiṉṟuma-
113. ticcu o-
114. kku . . .
115. ṇṟu ṅāḻi
116. uriyāl
117. . . . .
118. yiruṅāḻi
119. akkiram
120. patiṉāḻi
121. i-p-perumā-
122. . ḷ ṅāṭai cila-
123. viṟku ava-
124. ṟṟiṟku ṅā-
125. ḻuri kiṟṟa-
126. ṭiccurattu
127. moloṭik-
128. ku ṅāḻuri
129. . . k oṭut-
130. tu . ka . ṉ
131. ṟa maṅṅa-
132. latt-Iravi-
133. y-Irāyaraṉ
134. kaiyeḻuttu [|*]
135. . . ṇa . .
136. la

137. kkaḷuṅ
138. yum . .
139. . .
140. . . . .
141. micāṅaṅ-
142. kaiyaraṭiyār
143. āṟikku . .
144. ccan-eḻuttu [| *]
145. Aṟaicūr ācā-
146. ri kaiyeḻut-
147. tu [| *] Tiruppe-
148. rūr maṟaik-
149. ka . . Kaṇṭācca-
150. ṉ kaiye-
151. ḻuttu śrī [|| *]

12th: No. 3

TAS, VII, p. 117 — Ko. 348: A.C. 1174

1. Svasti śrī [| *] Kollam 348 ṭām-āṇṭai-k-Karkkaṭakattil Viyāḻaṅ ṅiṉṟa Miṉañāyiṟu 10 ceṉṟa Viyāḻam Aṉuḻam i-ṅ-ṅāḷāl Veṇāṭṭu iḷaṅkūṟu vāṇṇaruḷukiṉṟa Śrī-Vīra-Utaiyamārttāṇṭavarmma tiruvati Tiruvāṭṭāṟṟu paḷḷikoṇṭaruḷiṉṟa perumāḷku ṅiyatippaṭi muṭṭā-c-cilavu aricikkuṅ-Kuḻumai Āticcaṉ-utaiyaṉaṉṉum tampimārkum oḷḷa ṅilam ceṟiya kaṭaikkuṭṭipeṟai vum māttarai kūṭa taṭi 2-ṉāl 5-m 4-pa melum oḷḷa mūṟu calākaiyum aḷakaccu 30-tiṉṉum
2. poliyāl Kotaiṅallūr kiḻcceri-t-tirukkoyilkkal koṇṭu vaṅṅu uṇaṅṅi . . . . . . kku pūvaḷi

12th: No. 4

TAS, VII, p. 25 — Ko. 354: 1179 A.C.

1. Svasti śrī [|*] Kolla[m*] 354-lāvatu Viru[c*]cika ṅāyi-
2. ṟu 8 ceṉṟa Viyāḻam Mu[la]mum i-ṅ-ṅāḷāl Veṇ-
3. āṭṭil Śrī-vīra-Utaiyamāttāṇṭavaṉmar tiruvaṭi
4. Tiruvāṭṭāṟṟukku kiḻakkil tiruṅantāvaṉattil ko-
5. yilāy iruṅtaruḷi Veṇāṭṭil kāriyañceyyiṉṟa-
6. varkaḷum i-ṉ-ṉāṭṭil kāriyañceyyiṉṟavarkaḷuṅ-
7. kūṭi eḻutiya ceyakaṭa-v-olaikkaraṇam-āvatu [| *] Kiḻḻi-
8. yūr Cemmutai-māmpāḷḷattiṉṉu ellai-y-āvatu [|*]
9. kiḻakkellai Tiruppiṟamalaikku-p-paṭāttatu mele-
10. llai Kampuḷḷāṟṟiṉṉu paṭāttatu teṉ-ṉ-e
11. llai Puṉpātirkal kalveṭṭi ṅāṭṭiyatiṉṉu
12. kiḻakku vaṭa-v-ellai Koḻukkoṭṭai māvi-
13. ṉkal Mutupalāviṉṉu teṟku i-vv-ellai ṅa-
14. ṭuviṟ-kiṭaṅta Cemmutai-māmpaḷḷam pūmiyum pu-
15. raiyiṭamum atiṉṉu paṭuṅ-karai-k-kāṭum eppe-
16. rppaṭṭatum Vayakkalūr-c-Cekaraṉ Kumaraṉṉu
17. Veṇāṭṭu-t-tiruvaṭi tiruṅāmapper eḻutiya ka-
18. raṇa tirumukamu[ṅ] koyiṟkuṟi eḻuticcu-k-koṇ-

19. ṭu melpātikku Kiḻḻiyūr Pirāyiśvara[t*]tu Mahā-
20. devarkku Āciṟāmattu perumakkaḷ kalliluṅ-ce-
21. mpilum veṭṭiccukoḷka eṉṉu koyiṟku-
22. ṟiyum tirumukamum Vayakkalūr Cekaraṉ-kumaraṉe
23. kaikkoṇṭu mahādevarkku tiruṅaṭaiccela-
24. vu ṅimaṅtam ilai muṉṟuvar muṉṉāḻicce a-
25. riyikku eḻuṅāḻi uricce ṅellāka tiṅkaḷ
26. patiṉāḻikkālāl kalaṉe eḻukuṟuṇi aññāḻic-
27. cai ṅellāka āṟu tiṅkaḷāl ṅel 9 (kala) mākavum
28. āṇṭāl ṅel 18 (kala) mākavum cāṅti ceyiṉṟa
29. ṅampi vayamum vāriyaṉ vayamum tiṅkaḷ vāram aḻivu
30. koṭuttu avaraḷ kaiyāl kuṟiyuṅ-koṇṭu caṅti-
31. rātittar kālam tevaṟku tiruṅaṭai-c-celaviṉṉu ari
32. celuttuvitu Cekaraṉ-kumaraṉ [Kiḻḻiyūr] Pirāyi-
33. śvaramuṭaiya Mahādevaṟku [||*]

12th: No. 5

TAS, IV, pp. 46-65 Ko. 364: 1189 A.C.

First plate : first side

1. Kollam muṅṅūṟṟu aṟupattu ṅālām-āṇṭai Taṉu-ñāyiṟu oṉṟu ceṉṟa Caṉi Catyam Veṇāṭu vāḷ[ṅta]ruḷiṉṟa Śrī-Vira-[uta][ya*]-Mārttāṇ-
2. ṭavarma tiruvaṭi Tiruvāṉaṅtapurattu comāyi-k-kūṭi-k-koyikkal koyilā[y*] iruṅtaruḷa Tevite[ve*]ccu-
3. varattu sabhai eḻu[ṅ*]ṅaruḷi Śrīvallabhaṅ-Kotavarmmar Veṇāṭṭaṭikaḷ kālattu avariṭaya tāyār teviyār pirati-
4. ṭṭapaṇṇit-t-taṅṅa kālattu tevattuvam pirammattuvam-atiṉṉum paṇṇit-taṅṅa piracatti jīrṇṇiccu cevatu aṟiya-
5. rutāte irukkiṉṟatu perttu piracatti paṇṇittaraveṇṭum-eṉṟu sabhai aruḷic-ceyya eḻutiya piracatti
6. āvatu [|| *] akaṅāḻikai-c-celaviṉṉu Iṭaippaḷayaṉāṭṭil Ciṟṟel koḷḷuṅ-ṅel ṅūṟu paṟa Maṭayūr Neṭ[ṅṅo]ṭ-
7. ṭāl koḷḷu[m*] ṅel irupatu paṟa [! *] Maṭaiyūr Ceṅkoṭṭu koḷḷa ṅēl patiṉ aympaṟa [|*] mēṟpaṭi -y-ūril-k-Kuḻaikkāṭṭu koḷḷu[m*] ṅe-
8. l patiṉaṟu paṟai iṭaṅkaḷiyāl aññāḻi [|*] meṟpaṭi-y-ūril Kuṟavarkoṇattāl koḷḷu[m*]ṅel muppaṟa [|*] Pālelmuṭṭattil Ṅa-
9. vayyaṅallūrāl koḷḷu (ṅṅeḷḷu) ṅ- ṅel paṅtiru paṟa arai [|*] meṟpaṭi- (paṭi) Aṅtarimāyiṉaṅkal koḷḷuṅ-
10. ṅel mu-p-paṟa [|*] Meyūrkkalil Kollūrāl koḷḷuṅel patiṉ paṟa [|*] Koṇ-ṇiramaṟuku civitat-

First plate: second side

11. til Melko[ṅṅu]ṉṟaṅ kūṭakki[ḻacaipa]ta puṟayuṅ-Kuḻiṅtuṭavalu[m *] kūṭa ṅilattiṉṉu koḷḷuṅ-ṅe-

12. l ṅūṟṟu irupattuiru-paṟa iṭaṅkaḻiyāl-eḻuṅāḻi uri [| *] meṟpaṭi-y-ūril meṟpaṭi-y-ūril Ayattiṉṉu palavakaiyuṅ-

13. koḷḷuṅ-ṅel aympattiru paṟa [|*] Marutakaceri koṇattāl koḷḷuṅ-ṅel iru tūṇi [|*] Meṟpaṭi-y-ūril Maṟṟattiṉ-

14. ṉum Aṇṭaveṇṇiṉṉu[m*] Kamukaṟaikkuṅ-koḷḷuṅ-ṅel aṟu-paṟai patiṉāḻi [|*] Vaṭakoṭṭu koḷḷuṅ-ṅel oru tū-

15. ṇi [|*] Iṭaikkoṭṭil Pirappaṇakkoṭṭu vaṭṭattāl palavakaiyuṅ-koḷḷuṅ-ṅel ṅūṟṟuṅālppatu paṟa [|*]

16. I-ṅ-ṅel Meṭamum-Iṭapamuñ-celaviṉṉu oḷḷo [|*] ivu meṟpaṭi-y-ūril Cilakkoṭṭāl vakaiyumākkoḷḷu

17. ṅel ṅūṟu paṟa [|*] Toṉṟakkalil Muḷaiccalāl koḷḷuṅ-ṅel patiṉaṟu arai [|*] meṟpaṭi-y-ūril Puṉṉaimuṭṭattā-

18. l koḷḷuṅ-ṅel paṅtiru paṟa arai [| *] meṟpaṭi-y-ūril Koṭutā aṟaikku koḷḷuṅ-ṅel paṅtiru paṟa arai [|*] Muṭṭap-

19. pulañ-civitattil-c-Campāmaṇṇiṉṉum Iḷakkoṭṭiṉṉuṅ-koḷḷuṅ-ṅel aṟu tūṇi [|*] meṟpaṭi Pullaṉatu Kaṇṇa-

20. ṉtuṭavai ṅāloṉṟu kaṅṅāṇiccu koḷvitu [|*] Kiḻppulattil Miḷakutuṭavvāl koḷḷuṅ-ṅel aympaṟa [|*]

Second plate : first side

21. meṟpaṭi-Toḷukkāl koḷḷuṅ-tirama[m*] paṅtiraṇṭiṉ kiḻ iraṇṭarai [|*] Kuṭṭattūril Kuḻimaṇṇum Puttaṟayu[m*] vāṅ-

22. ṅalu [|*] Puṉṉamaṇkoṭuṅ-kūṭa iṭaippaṭṭa ṅilam vāri[ya*] muṭaiyavaraḷ vāḻiccu koḷvitu [|*] Ciṟṟāṟṟaṅkarayil Ve-

23. ṇkoṭṭamaṇ koḷḷuṅ ṅel muppattu muppaṟa [|*] Iḷampelāpaṟattiyāl koḷḷuṅ-ṅel paṅtiru paṟa arai [|*]

24. Mutākkalil Koṭṭupeṟa patiṉampaṟa vittupāṭu ṅoloṉṟu kaṅṅāṇiccu koḷvitu [|*] Pakaḻipeṟa i-

25. rupatu paṟa vittupāṭum Kovi[yū]r muppatu paṟa vittupāṭum Peyaṟa patimpaṟa vittupāṭu[m*] ṅāloṉ-

26. ṟu kaṅṅāṇiccu koḷvitu [|*] Kiṭaippuṟam aympaṟa vittupāṭuṅ-ṅāloṉṟu kaṅṅāṇiccu koḷvitu [| *] meṟpaṭi-yi-

27. l Kiṭaippuṟam mele vittiṉṉu pāṭṭattāl koḷḷuṅ-ṅel patiṉa[m] paṟa [|*] Iṭukkiṉaṅkal koḷḷuṅ-ṅe-

28. l muppaṟa [|*] Iyalappaḻḻimala ṅa ttiṉṉu koḷṅ-ṅel aympaṟa [|*] Kuvvūr-kkalil Āṭṭaṟvattil mū-

29. ṉṟu kaṅṅāṇiccu ko[ḷ*]vitu [|*] Uḻamalaikkal-civitattil Paṟanṭakoṭṭāl koḻḻuṅ-ṅel mu[ppa*]ttaṟu-paṟa [||*]

Second plate: second side

30. Mārkaḻi viḻāviṉṉu Kiḻupulattil kāṭaṉatu Kuvayāl koḻḻuṅ-ṅel eṇpattu-aym paṟa [|*] Vaimaṇa-

31. ñ-civitattil Puṉayūrāl koḻḻuṅ-ṅel aṟupattoru paṟa [|*] Ilavamaṇ civitattil rakṣāpoka[t*]tā-

32. l koḻḻuṅ-ṅel mu[p*]paṟa [|*] Puṇarata-viḻāviṉṉu Uḻamalaikkal-k-Kurukkārtti mel koḻḻuṅ-ṅel mu[p*]-

33. pa[tu]paṟa ṅel koṇṭuvaṅṅu viḻāvu ceytutovitu [||*] Kārāḷaṉ Puṉṉait-toṭṭam Paṅṅuṇi viḻā-

34. viṉṉu Iṭaikkāṭṭil Puṉṉaveliyāl koḻḻuṅ-ṅel ṅūṟu paṟa tiruviḻā-v-iraṇṭiṉ-ṉuṅ [||*] kalaimā-

35. ṭuvāṉ koḻḻu[ṅ*] ṅey maṭaiyāl patiṉaṟu ṅāḻi [|*] Vāṇiyacceri kuḷaṅṅarai puraiyiṭattāl koḷ-

36. ḻu[ṅ*]ṅey maṭaiyāl patiṉaṟu ṅāḻi [|*] Puttaḻiyattāl koḻḻuṅ-ṅey maṭayāl patiṉaṟu ṅāḻi [|*] Ceṟi-

37. pariyāliṭaṅāṭu civi[ta*]ttil Muṅkuvaittiru (ttiru) ttiṉmel koḻḻuṅ-ṅey maṭayāl patiṉaṟu

38. ṅāḻi [|*] Iṟumaruṅṅamaṉ ṅāḻi piṭiccaḷaṅṅu koḷvitu [||*] Muṅkuva ṅūṟu paṟa vittpāṭum ṅā-

Third plate: first side

39. lu kuṭi vāṇiyarum-atikariccu karaipuraiyiṭamuṅ-kāṭu mi[k*] koḻḻa epperppaṭṭatum-atikariccukoṇṭu

40. ṅaṅtāviḷakku iraṇṭuñ-celuttivitu [||*] tiṅṅaḷ maṭayāl iruṅāḻicca ṅey-yamirtu-

41. m tiṅṅaḷ iraṇṭiṉṉum-āka muppatiṉāḻi eṇṇayu[m]ṅ-koṇṭceṉṟu koṭup-pitu [merppaṭi ṅi-

42. lattil kuḷamaṭikkiṉṟavar koḻḻuṅ-ṅel patiṉmuppaṟa [||*] merpaṭi Ṅakkar-vāvāḻiṉattiṉṉu celavi-

43. ṉṉu koḻḻuṅ-ṅel iru tūṇi [|*] Tevite[ve*]ccuvaṟattu vāṇiyar ṅālukuṭik-kuṅ-kuṭi i . . . . .

44. tta puraiyiṭam celavuṭayavaraḷkku koṭukkuṅ-kalppaṭṭu iraṇṭu [|*] merpaṭi veṟṟilai i[ru ṅūṟu a]-

45. ṭaikkā aṟupatuṅ-kūttiṉṉu araṅṅattu viḷakku vaippā[ṉ*] [||*] Iṭaicceri-p-purayiṭam-iraṇṭu puraiyiṭa-
46. m viḷa[k*]ku vaiyppāṉ koḷḷuṅ-teṅkāṅey iṭaṅkaḻiyāl ṅāṉāḻi [||*] meṟpaṭi-toṭṭattāḷ śrī-
47. pelikku kaiyviḷakkiṉṉu koḷḷu[m*] ṅey iraṭṭayāl muṅṅāḻi [||*] Ṅaṅtāmaṉa-p-puraiyiṭattāl

Third plate : second side

48. tiṅkaḷ vāra meṟpaṭi kaiyviḷakkiṉṉu koḷḷu ṅey iraṭṭayāl muṅṅāḻi [|*] meṟpaṭi purayiṭam vāriyamuṭayā-
49. varaḷ pāṭṭaṅkoṭuttu koḷvitu [|*] tirukkalacam-iraṇṭu Ciṟamel purayiṭat-tāl kalacami-
50. raṇṭiṉṉuṅ-koḷḷum pāl muppattiru ṅāḻi [|*] meṟpaṭi ṅūlaḻi- ttiṉṉu ṅaṅtāviḷakkiṉṉu koḷ-
51. ḷu[m*] ṅūl tiṅkaḷ oru palam-āka āṇṭuvarayuṅ-ṅūl paṅtiru palam [|*] meṟpaṭi purayiṭattiṉṉu āṇṭu
52. vara koḷḷu ṅey maṭayāl ṅāḻi [||*] Kalacāṇiyar purayiṭattiṉṉu maṇkalai (yyi) yattiṉṉu koḷḷu
53. ṅe maṭayāl iruṅāḻi [|*] Vaṇṇārkaṇṭattiṉṉu koḷḷuṅ-tirukkoṭikūṟa-iraṇṭu [|*] I-
54. ḷampaḷayaṉāṭṭil Mayilakkoṭu ṅilattiṉmel tirukkuṭa-y-iraṇṭu [|*] iviṟṟiṉṉu ṅel a-
55. ṟu paṟa [|*] Nakarūrvaṭṭattil Perumpaḷaṅṅimel kārāṇmamel kalppicca ṅel muppaṟa [||*] ivu āṟā-

Fourth plate : first side

56. ṭṭiṉaṅ-kālattu pirāmaṇar amitu ceytatiṉṉu koḷvitu [|*] āṟāṭṭumpoḷ tiruvamirtiṉ [ṉu]
57. Ciṟṟāṟṟaṅkara civita[t*]til pūppaḷḷiyāl koḷḷum ari maṭayāl ṅūṟṟu ṅāḻi [||*] Ciṟṟāṟ-
58. ṟa[ṅ*]karayil Kaṭuvelamālakuḷattāl Viriccikaviḷakkiṉṉu koḷḷum-eṇṇa iraṭṭayāl pa-
59. tiṉaiṅṅāḻi [||*] tirumoratiṉṉu ari maṭa ṅāṉāḻi [||*] ṅūl oru palam [|*] veṟṟila ṅūṟu [|*] paḻukkā
60. irupattu añcu [|*] Māmpaḷḷi-p-pullālil Viriccika viḷakkiṉṉu koḷḷum-eṇṇa ira-
61. ṭṭayāl eḻuṅāḻi uri [|*] ari maṭa iruṅāḻi [|*] ṅūl arai-p-pala[m*] veṟṟila aympatu [|*] aṭaikkā

62. paṅtiraṇṭu [|| *] Maṭavūril [Pa]ṉaimpaḷa pūmiyāl koḻḻuṅ-ṅel patiṉaimpara Viriccika viḷakkiṉṉu [|| *]

63. Mutākkalil Koṭṭupeṟayil Viricci[ka*] viḷakkiṉṉu koḻḻum eṇṇa iraṭṭa eḻuṅā uṟi [|*]

64. ari maṭa iruṅāḻi [|*] veṟṟila ampatu [|*] aṭakkā paṅtiraṇṭu[|*] ṅūl arai-p-palam [||*] Ciṟayū-

Fourth plate : second side

65. rkkalil Tirumaṇikkoṭṭāl-k-koḻḻuṅṅel paṅtiru paṟa arai [||*] melcānti-virutti i-

66. ṭaikkoṭṭil Ātaṅkoṭṭāl-k-koḻḻuṅ-ṅel irupatteḻu paṟa arai [|*] meṟpaṭi Ceṅkuṟuppā-

67. l koḻḻuṅ-ṅel irupatteḻupaṟa aṟai [||*] Ciṟṟāṟṟaṅkaraiyil Ṅākālāl-k-koḻḻuṅ-

68. ṅel aympatu paṟa [|*] meṟpaṭiyil Vāññaṉūrāl-k-koḻḻuṅ-ṅel irupattaim-paṟa [|*] meṟpaṭiyil-

69. Māvaṟai-k-koḻḻuṅ-ṅel mu-p-paṟa [||*] kiḻ-cāṅti-virutti Iḷampel-c-Ceṅ-koṭṭāl-k-ko-

70. ḻḻuṅ-ṅel patiṉmu-p-paṟa [|]* meṟpaṭiyil pālayaṟaiyāl koḻḻuṅ-nel iru-tūṇi [|*] Peruṅṅaṇmalai I-

71. ṭamaṇ ṅilattāl koḻḻuṅ-ṅel irupattiru paṟa [|*] Puṉalūriyil vāḻaik-kuṉṟattāl

72. koḻḻuṅ-ṅel muppattoru paṟa arai [|*] meṟpaṭiyil Kuṟukuvaikku koḻḻuṅ-ṅel-muppatu o-

73. ru paṟa arai [|*] āka ṅel ṅūṟṟu a[rai*] paṟa iṭaṅkaḻiyāl aṟuṅāḻi uri āḻakku [||*] eḻuṅaḻḻikku

Fifth plate : first side

74. ṅampivirutti Paṟiyāṭi mūlaiyil Eṟikaṟiṅāṭṭāl koḻḻuṅ-el eḻu-tūṇiyāl

75. patiṉ oru paṟa iṭaṅkaḻiyāl aṟu ṅā ḻi* uḻakkāḻākku [| *] Mevūṟkkalil Koṭṭūṟāl ko-

76. ḻḻuṅ-ṅel oru tūṇiyāl ṅel oru paṟa iṭaṅkaḻiyāl aṟu-ṅāḻi uri āḻakku [|*] Ilavama-

77. ṇṇil Melkkovilkkāl ṅilam patiṉ aympaṟai vittupāṭṭālu ṅāloṉṟu kaṅṅāṉic-

78. cu koḻvitu [||*] aṭikkiṉṟa vāriyaṉmār civita[m*] Pālelmuṭṭattu ṅāḻāl-maṇiyāl-k-koḻḻu-

79. ṅ-ṅel muppattu mu-p-paṟa [|*] meṟpaṭiyārkku Melperuṅṅoṭṭāl koḻḻuṅ-ṅel muppattu-mu-p-paṟa [|*] meṟpaṭi

80. yārkku Maṭaiyūr Neṭuṅṅoṭṭu prayiṭattāl koḻḻuṅ-ṅel iru-tūṇi tūṇiyāl ṅel mu-p-paṟa

81. iṭaṅkaḻiyāl mu-ṅ-ṅāḻi uḻakku [|*] āka ṅel aṟupattu mu-p-paṟa iṭaṅkaḻiyāl mu-ṅ-ṅāḻi

82. uḻakku[||*] Koṭuvaḷanūril Kūttāḷaṅkoṭṭāl kuḷamaṭikkumavan civitattinnu koḻḻu[m*] ṅel

Fifth plate : second side

83. patinmu-p-paṟa [||*] kuḷamaṭikkum avannoḷḷa kuḷattaḻivakattinuḷ vāriyañ-ceyyum-avar koḻḻum

84. paṅtiraṇṭin kiḻattiram iraṇṭu [|*] tiruṅaṅtāvana-viruttikku Pullel Aṟuṅaṅṅūru elvāyi-

85. l Konṟai-aṟaikku koḻḻuṅ-ṅel patin aṟu paṟa arai [|*] Irāṟṟiṭai civitattil Vāḻaippaḷ-

86. ḷi koṇattinnu koḻḻuṅ-ṅel eṇ-paṟa iṭaṅkaḻiyāl iru-ṅāḻi uri[|*] Pāleraṭṭañ-civita-

87. ttil Ayirūrkoṭṭāl koḻḻuṅ-ṅel irupatum paṟa [|*] Ilavamaṇ-civitattil Uyiṟkalāl ko-

88. ḻḻuṅ-ṅel eṇ-paṟa iṭaṅkaḻiyāl iru-ṅāḻi uri patin aṟu paṟai arai [|*] Iḷavampaḷaiṅāṭ

89. ṭil Kuṟṟi-ūrāl koḻḻuṅ-ṅel irupatu paṟa [|*] Peruṅṅaḻḻūr civitattil Oruvalli-

90. yārattāl koḻḻuṅ-ṅel patin-paṟa [|*] Koṇṇiramaṟuku civitattil Tāmpūr patin-paṟai vi-

91. ttupāṭuṅ-ṅālonṟu kaṅṅāṇiccu koḷvitu [|*] āka pāṭṭattāl ṅel koḻḻuṅ-ṅel

Sixth plate : first side

92. toṇṇūṟṟu oru paṟai iṭaṅkaḻiyāl iru ṅāḻi uṟi [|*] kaṅṅāṇi patin paṟaiyāl ṅel pa-

93. tin paṟa [|*] kūṭa ṅel ṅūṟṟ-oru paṟai iṭaṅkaḻiyāl iru-ṅāḻi uri [|*] Viruttipurañ-civitatti-

94. nnu Ilamuṇṇil Kuvaiyūrvaṭṭattāl koḻḻuṅ-ṅel eṇpatu paṟa [|*] meṟpaṭiyil Pālaippunnaiyāl

95. koḻḻuṅ-ṅel patin-aṟu paṟa [|*] Ciṟṟāṟṟaṅkarai Putumarkkuḻi muppatin [paṟai vittupāṭu [||*] Cākkaimār vi-]

96. rutti Nakarūr vaṭṭattil Ceṅkaiyūrāl-k-koḻḻuṅ-ṅel paṅtiru paṟai arai [|*] Peruṅṅaṇmalaiyil

97. meṟpaṭi-yūr viruttikku akappotuvāḷ (vāḷ) Muṅṅamaṉaikku Ciṟṟāṟṟaṅkarai Māmpaḷḷi pul-

98. lālmel koḷḷuṅ-ṅel irupatu [pa*]ṟa [|*] meṟpaṭi-yārkku Karamaṉai Ciṟṟāṟṟa[ṅ*]karai orumai vilaikku koḷ-

99. ḷuṅ-ṅel irupattu-oru paṟai arai[||*] meṟpaṭi Cārakaveṇpāy-kuṉṟattu Ilavaṉkoṭṭu koṇṇā koḷ-

100. ḷuṅ-ṅel patiṉ paṟaiveppavaṉṉu [||*] Pālervaṭṭattu Veḷḷalūrā tiruvamirtiṉṉu koḷḷuṅ-ṅe-

Sixth plate : second side

101. l muppattu mu-p-paṟai iṭaṅkaḻiyāl eṇṇāḻi [||*] meṟpaṭi civita[t*]til uvāviṉṉu oḷḷu ṅilam pa-

102. tiṉ eṇ (m) paṟai vittupaṭu mutuveḷḷaiṉaviṟu [||*] tiruppaḷḷittāmaṅkoṭṭiṉṟavaṉṉu civitattiṉṉu

103. oḷḷa mutākkal civitattil Iṭṭaiṉṉaṭṭu kottatiṉṉu koḷḷuṅṅel irupatu paṟa [|*] meṟpaṭi-yā-

104. rkku Oṟṟiy-ūr civita[t*]til Iṭaiccūraṉāṭṭiṉṉu koḷḷuṅ-ṅel patiṉ paṟa [|*] Oṟṟiyūri-

105. l Caṭaiyamaṅṅalattiṉṉu koḷḷuṅ-ṅel aympaṟa [|*] Veṇpāy-kuṟṟa[ttu] Neṭuṅoṭṭiṉ mel-

106. k-koḷḷuṅ-ṅel aympaṟa [|*] āka ṅel ṅāṟppatu paṟa [||*] tirumeṉikāvalkku Virutti Malai-

107. kkal Ṅallūrāl-k-koḷḷuṅ-ṅel patiṉ-paṟa Ciṟṟāṟṟaṅkaraiyil Pulamāṭṭelvāyil Ira-

108. viṅṅallūr ṅel patiṉ paṟa [|*] Oṟṟiyūr civitattil Cemmaruti elvāyil ṅel pa-

109. tiṉ-mu-t-tūṇiyāl irupattoru paṟai iṭaṅkaḻiyāl aṟu-ṅāḻi āḻakku [|*] Ilava-

Seventh plate : first side

110. maṉṉil Muṭṭappulattelvāyil Kavaiyaṟaikku koḷḷuṅ-ṅel aym-paṟa [|*] āka ṅel ṅāṟppatta-

111. ṟu paṟai iṭaṅkaḻiyāl aṟu ṅāḻi āḻakku [|*] ūr-p-potuvāḷ virutti Oṟṟiyūril Muṉṉaṭṭaṟai-

112. yāl ṅel irupattiru paṟa [|*] Iḷampelil Āyiraviḷaiyāl ṅel patiṉ paṟa [||*] āka ṅel muppattiru

113. paṟai [||*] uvaccakaḷ virutti Iṭaikkoṭṭil Maṉaccai irupatu paṟai vittupāṭṭiṉmeluṅ-

114. koḻḻuṅ-ṅel aṟupattaṟu paṟai iṭaṅkaḻiyāl aṟu ṅāḻi [|*] meṟpaṭi-yūril Kuṟaṇṭimaṇkāṭṭā[l*]

115. koḻḻuṅ-ṅel muppattumu-p-paṟa [|*] oru karavaṭṭattil Perumpaḻaññiyāl ṅel muppatteḻu paṟa

116. iṭaṅkaḻiyāl aññāḻi [|*] Uḻamalaikkalil mel-c-Ciṟuveṟu iṭai-c-Ciṟuveṟu [kiḻ-c]-

117. Ciṟuveṟum-āy-k-koḻḻuṅ-ṅel eḻupatu paṟa [|*] Mutākkalil iṭaittoṭṭaṅṅilam pati-

118. ṉaiym-paṟai vittupāṭu ṅāloṉṟu kaṅṅāṇiccu koḷvitu [|*] Iḻampelil Āvaṟ [ṟṟai va]-

Seventh plate : second side

119. liyatuṭavalkku kiḻattoṭṭiṉ mel-k-koḻḻuṅ-ṅel aṟu[pa*]ttaiym paṟai iṭaṅkaḻiyāl

120. aññāḻi [||*] meṟpaṭi-yil Koṭṭivaiyāl-k-koḻḻuṅ-ṅel irupatu paṟa [|*] meṟpaṭi taḻiviruttiyā-

121. k-koḻḻuṅ-ṅel patiṉ-paṟai [|*] Nakarūvaṭṭattil Akaḻaca patiṉaṟu paṟai vittupāṭum puraiyiṭamu-

122. ṅ-kūṭi-y-iruppāṉoḻḻitu [|*] Ciṟṟāṟṟaṅkaraiyil Uḻḻūrāl koḻḻuṅ-ṅe[l*]-l-eṇ-paṟa [|*] meṟpaṭi

123. yil Iṭaiyūrkāṭṭu koḻḻuṅ-ṅel patiṉaiympaṟa [|*] Toṉṟakkalil [ku]ṇṭettu ko-

124. ṇattiṉmel-k-koḻḻuṅ-ṅel patiṉaṟu paṟa [|*] meṟpaṭi-yil eṇ-paṟai vittupāṭuṅilaṅ-kaṅṅā-

125. ṇiccu koḷvvitu añciranṭu koḷvitu [|*] Mevūrkkalil Maṇṇaṟayāl-k-koḻḻuṅ-ṅe-

126. l aymparai iṭaṅkaḻiyāl aññāḻi [|*] meṟpaṭi-yil-t-Takaraittaṭi aṟupaṟai vittupāṭu

127. ṅāloṉṟu kaṅṅāṇiccu koḷvvitu [|*] Nākaṉār tuṭavaikkum Pūḻaiyāluṅ-.koḻḻu-

Eighth plate : first side

128. ṅ-ṅel aṟu-paṟai iṭaṅkaḻiyāl aṟu ṅāḻi [|*] Malaikkalil Vallūrāl-k-koḻḻuṅ-ṅel

129. patiṉ-paṟa [|*] Teviteveccuvarattu uvaccakaḷ kuṭiyirukkum-eṭattiṉṉuñciṟaikki-

130. ḻumāy-k-koḻḻuṅ-ṅel patiṉaiym paṟa [||*] puṟa-p-potuvāḷ virutti Ilavamaṇṇil Palā-

131. varaikku kolluń-ńel patin-aru parai itańkaliyāl aññāli [|*] Muttaikkāyi-
132. l Vilańtoti muppatu parai vittupātuń-ńālonru kaṅṅāniccu kolvitu[|*]
133. Pulikkonūr tontanār tutavaiyāl-k-kolluń-ńel aym-para [|*] Ñāralūrkkal
134. kkalil Konraikkalkku kolluń-ńel patin-parai [|*] merpatiyūril Kulap-pāttattin-
135. nu melkkonattinmel-k-kolluń-ńel onpatu para [|*] merpati-y-ūril Puvvūrāl ńilam
136. āru-parai vittupātu ńālonru Kaṅṅāniccu kolvitu [||*] Nannāttu kālil Marutarai
137. k-kottāl-ń-ńel irupattaiym-para [|*] Tonrakkalil Kulavikottāl-k-kollu-

Eighth plate : second side

138. ń-ńel irupatu para [|*] Ilamvelil Kuntaraikku kolluń-ńel patin-parai [|*]
139. merpati-y-ūril Iravattinnu kolluń-ńel patin-para [|*] Kotuvalanūril Kūtāla-
140. ńkottāl aympattaru-para [|*] Pōtikāttuvilaiyil Vālamannāl k-kol-
141. luń-ńel irupattaympara [|*] Ilampalayanāttil Nettayattinnu kolluń-ńel
142. patin-para [|*] Venpāykkunrattu kokkarunniyum Mannārapperaiyuń-ńālonru
143. kaṅṅāniccukolvitu [|*] Mānikkalil itańirkkum Murukanaraikkuń-kollu-
144. ń-ńel ńālppattelu-para [|*] Venpāykunrattu Puliyankottāl-k-kolluń-nel pa-
145. ńtiru para [|*] Kalavānivirutti Orriyūr civitattil i-vv-ūrāl-k-kolluń-ńe[l*]
146. patin-para [|*] Ilavamannil Muttappulattelvāyil Uccikkulattāl ko-
147. lluń-ńel aym-para [|*] Cirrārrańkarai Katuvelippalākkāttu konattinnu

Ninth plate : first side

148. kolluń-ńel aym-para * Ākkal vāniyarkku kolluń-ńel irupatu
149. para [|*] vilakkupātta[t*]tinnu Kuvaiyūrkkalil Pullūrāl kolluń-ńel ńū-
150. rorupatutelu para [|*] merpati-y-ūril-p-Palākkāttāl-k-kolluń-ńel aym-
151. patu para [|*] merpati-y-ūril Palivilaikkolluń-ńel irupatupara [|*] merpati-y-ūril Pa-
152. laiyilaiyil Mutarkkunrattāl-k-kolluń-ńel ńālpatu para[|*] merpati-y-ūri-
153. l Āramannāl-k-kolluń-ńel muppattumu-p-parai [|*] Vellaiyūr-ńāttil Kā-
154. nūrāl-k-kolluń-ńel patinen para [|*] Ilamvelil Kattai-k-karaiyāl-k-ko-
155. lluń-ńel muppat mu-p-para [|*] Ayilan civitattil Mayilakolliyāl ńel
156. ńāl-p-para [|*] Iyalaippalli-t-tericanārvattattil Kannamaṅnalattin

Ninth plate : second side

157. mel-k-koḷḷuṅ-ṅel paṅtiru-paṟai iṭaṅkaḻiyāl aññāḻi [|*] Koṉṉi-
158. ramaṟuku civitattil melkoṅṅaṉṟattu ciṟaiyaṭikku koḷḷuṅ-ṅel aym-
159. paṟa [|*] meṟpaṭi-y-ūril-p-Peṟaiyāl-k-koḷḷu[m*] ṅel irutūṇiyāl ṅel mu[p*]paṟai
160. iṭaṅkaḻiyāl muṅṅāḻi uḻakku [|*] meṟpaṭi-y-ūril Perūrkkoṭṭu koṇat-
161. tiṉṉu koḷḷūṅṅel paṅtiru paṟa [|*] meṟpaṭi-y-ūril Paruttiyaṟaikku koḷḷuṅ-ṅe-
162. l eṉ-paṟa [|*] Oṟṟiyūr civitattil Ciṟukaṇṇaṉāṭu irupatu paṟai vittupāṭum e-
163. ṭṭoṉṟu kaṅṅāṇiccukoḷvitu [|*] meṟpaṭi civitattil Veḷiyaṉ-koṭṭāl-
164. k-koḷḷuṅ-ṅel iru-tūṇi araiyāl ṅel ṅāl-p-Paṟai iṭaṅkaḻiyāl ṅā-
165. ḻi uḻakku [|*] Ilavamaṇ civitattil Ciṟukuṉṟattil Uṟāppal ṅālo-

Tenth plate : first side

166. ṉṟu kaṅṅāṇiccukoḷvitu [||*] Iṭaippaḷayaṉāṭu civitattil Neṭuṅo-
167. ṭṭu koṇattiṉṉu koḷḷuṅ-ṅel ṅāl-p-paṟa [|*] meṟpaṭi-y-ūril Maṟṟattu-p-pūmi i-
168. rupatu paṟai vittupāṭṭiṉmel koḷḷuṅ-ṅey maṭaiyāl ṅāṉāḻi ari
169. maṭaiyāl ṅāṉāḻi veṟṟilai ṅūṟu aṭaikkā irupattaiñcu [|*] Aṟukā-
170. ṇirattu Mūṅṅalikkoṭṭu koṇattiṉṉu koḷḷu[m*] naṟuṅey maṭaiyāl ṅāṉā-
171. ḻi ari maṭaiyāl ṅāṉāḻi veṟṟilai ṅūṟu aṭakkā irupattañcu [|*] tiru-kalai-
172. cattiṉṉu[m*] kuṭattiṉṉum pālikaikkuṅ-kupparakku[m*] Cetiyapperu-vāliṅāṭ-
173. ṭil Kuḻaikkāṭṭāḷ koḷḷuṅ-ṅel patiṉppaṟai arai [|*] Koṉṉiramaṟuku ci-
174. vi[ta*]ttil Puḻiyaṉkkoṭṭāl-k-koḷḷuṅ-ṅel irupattāṟu paṟa [|*] āka ṅel

Tenth plate : second side

175. muppattaṟu paṟai arai [|*] Kuṭavūr Iṭiññilkku koḷḷuṅ-ṅel mu-p-paṟa [|*] taṅ-
176. tirikaḷkku virutti Kuvayūrkkallil Kaḻuttaṟumaṇṇāl-k-koḷḷuṅ-ṅel
177. irupatu paṟa [|*] Uḻamalaikkalil Pūlaṅkoṭṭālk-koḷḷuṅ-ṅel patiṉ-paṟa [|*] ā-
178. kaṅ-ṅel muppatu paṟai [||*] Śrīvallavaṅkotormmar piṟaṅṅa ṅāḷ Ut[ti*]-
179. raṅtoṟuṅ-kaṇamaṭuvāṉ Veḷḷakoṭṭil Ayalaṅāḷāl koḷḷuṅ-ṅel ṅū-
180. ṟṟu muppatu paṟai [|*] meṟpaṭikku Māṇikkalil Āḻimāṉūrāl-k-koḷḷuṅ-ṅel iru-
181. patu paṟa [|*] ākaṅṅel ṅūṟṟaiympatu paṟai [||*] Mahāpārataviruttikku Kiḻupulattil Māmaṇ-

182. ṉāl-k-koḷḷuṅ-ṅel ṅūṟṟaiympattu mu-p-paṟa iṭaṅkaḻiyāl muṅṅāḻi [|*]
183. Iṭaiyppaḷayaṉāṭu civita[t*]til Murukkaṟaikkuṅ Kaḷavaṟaikkuṅ-Koṉṟai araikkum-k-koḷ-

Eleventh plate : first side

184. ḷuṅ ṅāl aṟupatteḻu paṟai arai [| *] Paccaiyil mel-p-Paccai ṅālppatu paṟai vittu-
185. pāṭu ṅāloṉṟu kaṅṅāṉiccukoḷvitu [|*] Kirayaṉakoṭu[ṅi]rayyāṉoḷḷa
186. Pirayyamaṉkāṭṭil Irayīparaikkuḻiyum Eḻuttuvaḷākamum-Oṟiṭukiṭai
187. viruttikkuñ cuṟṟuviḷakkiṉṉum Ayyaṉkoyilkkal-t-taṉṉīr-y-aṭuppāṉu-
188. m Pūḷaikkuḷḷa ṉi[ṅ]ka Kovukkuriya kok-iṭai epperppaṭṭatuṅ-ṅālukuṭi ve-
189. ḷḷaṅāṭaraiyuṅkūṭakkarppiccitu [||*] meṟpaṭi Perumaiyil ṅāloṉṟu kaṉiṅāṉiccukoḷvitu [| *] meṟpaṭi
190. yoṭu kūṭa oḷḷa Perumpullel ṅāloṉṟu kaṉṅāṉiccu koḷvitu [|*]
191. Poḻikkaraitturaiyil upperuviyar irukkum-eṭattiṉṉu koḷḷum

Eleventh plate : second side

192. uppu mu-p-paṟai [|*] Paravūr ūrakattu Vātilkkarai-p-puraiyiṭattiṉṉu Ātaṅaru-
193. ṉayāṉ koḷḷuṅ ṅaṟu ṅey maṭaiyāl ṅāṉāḻi ari maṭaiyāṉāḻi veṟṟi[lai]ṅū
194. ṟu aṭaikkā irupattaiñcu [||*] pirammattuvañ-cāttiṉa vacai Valampuri-maṅṅa
195. pattu paṭakāram i-ṅey paḷayamāṭṭim mel ṅel(li) ṅālppatu paṟai vi-
196. ttupāṭu [|*] Perurvaṭṭaṉṉil Maṇaḻūr ṅālppatu paṟai vittupāṭaṅkūṭa ṅilam e-
197. ṇpatu paṟai [|*] Malaimelppaṭakāram meṟpaṭi-y-ūril-k-Kiḻṅelli mupparaitumparai vittu-
198. pāṭum meṟpaṭi ūril mel Maṇalūri ṅilam muppattaim-paṟai vittupā-
199. ṭum kūṭa ṅila[m aṟu]pattaim-paṟai [|*] Valampurimaṅṅalattu paṭakā-

Twelfth plate : first side

200. ram me ūri[l*] Mutuveḷḷayūr patiṉaimparai vittupāṭum meṟpaṭi yārkku Ciṟṟāṟṟaṅ-
201. ṅarai civitattil Mutuveḷḷayār muppatu paṟai vittupāṭum meṟpaṭi ūril Ma-
202. ṇmel-k-kaṇṭaṅṅaḷ eḻu-paṟai vittupāṭum kūṭa ṅilam aympattiru paṟai [|*] Nāvūr-
203. kkoṭṭiṉ paṭakāram Teviteveccuvarattu kuṭi irukkiṉṟa pura iṭamum Toṉ-
204. ṟakkal civitattil [Veḷa]m ṅilam eḻupattaim-paṟai vittupāṭum [|*] Muṭṭak-kaṭa-

205. ttiṉ paṭakāram Tevitevecuvarattu Melicci ṅilam aym-paṟaiyum Ciṟṟā-
206. ṟṟaṅkarai civitattil Ceṅkuḷam ṅilam ṅālppattaimpaṟaiyuṅkūṭa ṅilam aympatu
207. paṟaiyum [|*] Muṭṭkkaṭattu paṭakāram Iṭaippaḷaṉāṭṭil Kiḻicca ṅilam patiṉ-paṟai

Twelfth plate: second side

208. yum Ciṟṟāṟṟaṅṅarai civiṉṉaṉil koṭṭiṉmel ṅilam aympatu paṟai-
209. yuṅ-kūṭa ṅilam aṟupatu paṟa [|*] Marutūr paṭakāram Iṭaippaḷa-ṉāṭṭil Maru-
210. tūr ṅilam patiṉmu-p-paṟai Ciṟṟāṟṟaṅṅaraṅil Mulikkoṭu ṅilam aympatu
211. paṟai āka ṅila[m*] aṟupattu mu-p-paṟai [|*] Ceṉpaka[c*]ceri paṭakāram Iṭaippaḷaṉā-
212. ṭṭil Melālil ṅilam eḻu-paṟai Ciṟṟāṟṟaṅṅarayil Kuṟṟaṭṭaṅ-ṅilam
213. mappatu paṟai kūṭa ṅilam muppaṉṉeḻu paṟai [||*] Tiṭṭamaṅṅalattu paṭakāram I-
214. ṭaippaḷayaṉaṭṭil Kiḻālil ṅilam irupatu paṟa Ciṟṟāṟṟaṅṅaraiyi-
215. l-t-Tiṭṭamaṅṅalaṅṅilam ṅālppatu paṟai āka ṅilam aṟupatu paṟai [|*]

Thirteenth plate : first side

216. Pātirimaṅṅalattu paṭakāram Nakarūrvaṭṭatṉil Karaṅṅilikoṭṭu Ko-
217. ṉamaṅṅilam patiṉaim-paṟai [|*] meṟpaṭi-y-ūril-k-Koṭumuṭṭaṭi ṅilam aṟupatu paṟai
218. āka ṅilam eḻupattaimpaṟai [|*] Muṭṭakkaṭattiṉ paṭakāraṅ-Ṅarūrvaṭṭattil-p-
219. paṭiñāyiṟṟu Puṟaccai ṅilam oṉpatu paṟai Ciṟṟāṟṟaṅṅarai civitatti-
220. l Pūmaṉṉikuḷaṅ-ṅilam ṅālppatu paṟai āka ṅilam ṅālppattu o-
221. ṉpatu paṟai [|*] Aruviyūr-p-paṭakāram Nakarūrvaṭṭattil Puṟacca ṅilam patiṉ pa[ṟai] [|*]
222. Toṉṟakkal civiṉatṉil kūṭa Maṉaikāṭu ṅilam aṟupatu paṟai [|*] āka ṅilam
223. eḻupatu paṟai [|*] Pulikkoṭṭiṉ paṭakāram Nakarūr vaṭṭaṉṉil p-Pūḷako[ṭṭu]

Thirteenth plate : second side

224. koṉaṅ-ṅilam irupatu paṟai [|*] Ciṟṟāṟṟaṅṅarai civitattil Pulikko-
225. ṭu ṅilam muppatu paṟai [|*] āka ṅilam aympatu paṟai [|*] Nalppalācceri paṭa-
226. kāram Nakarūrvaṭṭattil-k-kallaṟai ṅilam patiṉ-paṟai [|*] meṟpaṭi ūril Peruṅṅarai
227. ṅilam ṅālppatu paṟai [|*] Ṅari-āṭi-mūcaiyil-p-Perumpuliyūr ṅilam
228. muppatu paṟai [|*] āka ṅilam eṉpatu paṟai [|*] Ṅāvūrkkiṭṭiṉ paṭakāram

229. ṅ Ṅakarūvaṭṭattil-k-Kaḷaiyūr ṅilam patiṉ-aim-paṟai Veṇpākkuṉṟañcivitattil
230. c-Cakari ṅilam patiṉeṇ paṟai [|*] Ciṟṟāṟṟaṅkaraiyil Avaḻūr ṅilam muppatu paṟai [|*]
231. āka ṅilam aṟupattu mupparai [|*] A[ru]viyūr-p-paṭakāram Ṅakarūrvaṭṭatti-

Fourteenth plate : first side

232. l Iṭaipperūr ṅilam aympatu paṟai [|*] Teviteveccuvarattu kuṭi iru-
233. kkiṉṟa puraiyiṭamuṅ-kūṭum [|*] Malaimel-p-paṭakāram Ṅakarūr vaṭṭattil
234. c-Ceṟuvarimaṉ ṅilam patiṉaiym-paṟai [|*] Puṟaccai-p-puraiyiṭamum Iṭai-
235. ppaḻayaṉāṭṭil-c-Ceṅṅaḻaṅīrmaṅka[l]attu puraiyiṭamum Ciṟṟāṟṟaṅ-
236. ṅarai civitat Ṅilappuṟaccaimalaimel-p-paṭakāraṅ-ṅilam irupa[tu*] paṟai [|*]
237. āka ṅilam muppattaiym-paṟai puraiyiṭam iraṇṭum [|*] Kaṉṉippaḷḷ-p-paṭakāra-
238. ṅ-Ṅakarūrvaṭṭattil Ṅarālūr ṅilam ṅālppatu paṟai [|*] Veḷḷakoṭṭil-t-Tampāṉū-
239. ril Talaittoṭu ṅilam ṅālppatu paṟai [|*] āka ṅilam eṇpatu paṟai [|*] Puṉṉaittoṭṭa
240. ṉṉiṉ paṭakāram Tericamārvaṭṭaṉṉil-k-Kamukuṉṟa-ṅ-ṅilam irupatu paṟai [|*]
241. Kūvaiyūrkkalil Āḻavāy ṅilam ṅālppatu paṟai [|*] āka ṅilam aypatu
242. paṟai [|*] Ṅāyurkkoṭṭiṉ paṭakāram Toṉṟakkalil-c-Caṭṭāṉa-ppaḷḷiṅila-
243. m ṅālppatu paṟai vittupāṭṭiṉ melum melpāti koḷvitu [|*] Puṉṉait po-
244. ṭṭattu paṭakāram Uḻamalaikkalil-k-Kurukārtti ṅilam eṇpatu paṟai [|*] Karumaṇaṟai
245. p-paṭakāram Ciṟṟāṟṟaṅṅaraiyilil-k-Kaṇṭamaṅṅalaṅ-ṅilam irupatu paṟai [|*] Ceṅṅa-
246. ḻuṅirmaṅṅalattu paṭakāram Ciṟṟāṟṟaṅkaraiyil-p-Pālaikkalveli ṅilam muppa-
247. tu paṟai [|*] Akapper irupattu-mūṉṟiṉāl-p-paṭakāraṅ-ṅilam āyirattumuṅ-
248. ṅūṟṟiṟupattaiymparai [|| *] i-ṅ-ṅilamum itaṉōṭu kūṭa mukkālvaṭṭañculaṉṟum kuṭi
249. irukkum puraiyiṭaṅṅaḷum vilakkavum vaikkavum aṭikoṭukkavu-

250. m atirikikkavum peṟār [||*] immārkkame sabhaiyum Veṇāṭṭiṉṉu mūppoḷḷa
251. piḷḷaiyārum Teviteveccuvarattu mukkālvaṭṭattu tekkiṉ cuṟṟumaṇ-
252. ṭapattil-k-kūṭṭamā iruṅṅu kuṭi[ṅo]kkuka eṉṟu avirotam paṇṇi[vattu] [||*] lā-
253. ḷ kaḻiññu sabhai maṉiṭacam potuvāṉmārum ṉiḷḷaiyār matiṭacamu-
254. m ceṉṟu kuṟaiṅokkum ṉāṉ kuṭi-iṟukkiṉṟa puraiyiṭattil-k-ku-
255. ṭi iṉṟiye irukkil-p-paṅtiru kaḻaññu poṉ sabhaiyum piḷḷaiyāruṅ-kū-
256. ṭi -p-paṭakāraṅ-tuyarṅṅu koḷḷuṅ-ṅel iruṅūṟṟu-ṅālppatu paṟai [|| *] iviṟṟāl ṅūṟ-
257. ṟirupatu paṟai śrī paṇṭāramāvitu ṅikki kuḷḷa vel ṅūṟṟirupatu paṟai-
258. yum piḷḷaimār matiṭakaṅ-koḷvitu [||*] Akaṅāḻikai-c-celaviṉṉoḷḷa toma-

Fifteenth plate : second side

259. m Viḷuvu ātiyāy sabhaiyil-iruvarum puṟaptetuvāḷuṅ-kūṭi-t-taṇ-
260. ṭi-k-koṇṭu celavuñ-celuttiy puṟampotuvāḷ [ma]ṭaiyāl iru-ṅāḷi
261. ruṟaiceyt-ariyuṅ-koṇṭu celavu celuttuvitākavum [||*] i-c-celavu
262. oru ṅāḷ muṭṭukil muṭṭiraṭṭi [|*] iraṇṭāṅ-ṅāḷ muṭṭi muṉṟu ṅā-
263. ḷ muṭṭukil sabhaiye paṟaiññutirttu celaviṭuvitu [||*] ivi-m-muṉṟu nāḷaka-
264. me arutāpoḷikil-p-piḷḷaiyāṟ iruṅṅ-eṭattiṅ-kūṭṭimuṭṭi yaṉi-
265. ṉoḷḷa poṭam poṉ paṅtiru kaḻaiññiṉṉum-oḷḷa ṅel iṟuṅūṟṟu ṅā-
266. lppatu paṟaiyum atikārikaḷaikkoṇṭu teṇṭaṅ-koḷvitu [||*] pāṉamūlaṉṉilo-
267. ḷḷ-oroṉṉarākil iraṇṭarai-k-kāṇam poṉ poṇṭamum vaiccu-c-celavuñ-cel-

Sixteenth plate: first side

268. [vatākavum [||*] Peraiya]ttum Peruṅṅaraiyuṅ-tavaiyiloḷḷoruttar kuṭi irukka
269. p-peṟāṟaiyuṅ-kaṟpiccu [||*] piracatti pa[ṇ]ṇiṅamaikkum pirammattu-vattiṉ melu-
270. m pātamūyattiṉ peṉa moḷḷoru kalavolai oṇṭākil-t-tāme veṇṭikkoḷvitu [||*]
271. aṭikaṉmārkkum piḷḷaimārkkum maṟṟum ārkkum perāṇa veṟu koṭakka-
272. p-peṟār [||*] koṭupporuḷarikil avar Veṇāṭṭu iḷaṅkūṟuvā[ḷ]um-avarkku paṅti-
273. rukaḷaiññe[1] añcu kāṇam poṉ teṇṭappaṭuvitu ṉammuṭaiya pomamu tāme veṇṭi-[2]
274. k-koḷvitākavuṅ-kaṟpiccamaikkum [||*] Irāṉatek ciripeli akatte-
275. ḷuṅ[ṅaḷ]ḷiyāl vāriyamuṭaiyavaraḷ[3] viruveṉṉāḷikaiyuṅ kaḻukiccu yiru vi-

Sixteenth plate: second side

276. lakkil ṅiṟaiya ṅeyyum aṭṭiccu tiriyuṅ-koḻuṉticcu vaiccu ti-
277. rukkāppum pūṭṭiccu kucciḷuvuṅ-tāḻkkālum puṟaptetuvāḷ
278. pakkal-k-koṭuppiccu cemmu pokkiccu akattetuvāḷaiyum akattu
279. kiṭatti ampalatti-v-vāyappaṭimel-t-tirumeṉikāvalaiyum tiruppaḷḷi-
280. ttāmamuṭaiyavaṉeyuṅ[4]-kiṭatti aṟaṅṅattu ṅālvar uvaiccaṟera-vuṅ-kiṭakku-
281. māṟu kaṟpiccu povitākavum [||*] vāriyam vaipparaḷai-c-ceviccu koṭṭum paṇiṅā
282. yem oropaṇi ṅūṟu[ṅū]ṟu ceytu veṟṟlaiyum aṭaikkā irupattaiñcuṅ ko-
283. ṭuttu oropaṇikku ṅel patiṉ-paṟaiccai celṉāka ṅālppatu paṟai veviḻuṉamo
284. ṅṅa koṭuppitākavuṅ kaṟpiccu [||*] immārkkam piracattipaṇṇi ṅamaikku itu piracatti paṇṇi [||*]

1. p.r. *kaḻaiññe.*
2. p.r. *ṅammuṭaiya vomamu tāme veṇṭi-*
3. p.r. *akattemuṅaruḷi vālavāriyavuṭaiyavaraḷ.*
4. p.r. *paḷḷittāmamuṭaiyavvaḷaiyuṅ.*

12th: No. 6

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1. Svasti śrī [||*] Karkkaṭakattil Viyāḻaṅ-ṅiṉṟa yāṇṭu kollam 371-m-āṇṭai Meṭaṅāyiṟu 24 ceṉṟa ṅāḷ-c-ceyta kāriyam-āvitu [||*] Veṇāṭu vāḷṅtaruḷu-kiṉṟa śrī-Vira-Rāmavarma tiruvaṭikk-amañca atikāraruṭaiya Ceṅkoṭṭāṟu
2. cerikkal Tirukku[ṉaka]rai āyiṉa Yātavaṅārāyaṇa viṇṇakar āḻvāṉṉu celavuṅ-tiruṅaṅtāviḷakkiṉṉum eḻuti ṅiṟoṭum-aṭṭikkoṭuttār atikārar [||*] i-k-kālam mutalāy i-c-ceri-kkal Veṇāṭṭaṟuṅūṟṟuvarum paṇi-
3. ceyyiṉṟavaraḷuṅ-kāriyañceyyiṉṟavaraḷum maṉuḷccamāy-t-tirukkuṉkarai-c-celavu celuttumavaṉ Poḷiyūr-p-paṭṭārakarkku celaviṉṉu muṉṉam atikārar kalpiccu viṭṭukoṭutta ṅilam ṅikki oḷḷatepperp-
4. paṭṭatum kūṭa atikariccukoṇṭu ṅiyatam maṭaiyāl ṅāṉāḷi-c-ceyt-ari tiru-vamirtuṅ-ceyyiccu oro tiruṅaṅtāviḷakkuṅ-celuttivaruvitu [||*] ṅiyatam amirtu ceyyum ari maṭai ṅāṅāḷikkum puṟai-k-kūli ṅikki ā-
5. ṇṭuvara veṇṭuṅ-ṅel (mara ?) -kkālāl irupattuṅālkkalamuṅ-tiruṅaṅtā-viḷakku oṉṟiṉu veṇṭuṅ-ṅeyyeṉṉayuṅ-tiri-ṅūlum muṭṭāte celuttivaruvitu [||*] Ceṅkoṭṭāṟṟu meḷuṅ-kiḻum-oḷḷa ṅilattil urāppūmiyum kārāṇ ṅila-
6. ttil-k-koḷḷum mel-p-pātiyuṅ-kāṭuṅ-karaippurayiṭamum āḻum mikku epperppaṭṭituṅkūṭa atikariccukoṇṭu celavum muṭṭāte celuttuvitu [||*]

itu orututai muṭṭukil muṭṭiraṭṭi [|*] iranṭu tuṭai muṭṭukil muṭṭiraṭṭi-yuṅ-tanṭa

7. mum [|*] mūnru tuṭai muṭṭukil aruṅūrruvarum paniceyyinravaraḷum patineṭṭirājyattil [va]ḷañciyarum ārāḷccapanni ācandratāraval muṭṭāte celuttuvitu [||*] i-c-cerikkal ṅālella akappaṭa-t-tōranamuṅ-ṅāṭṭi-t-tiru-viṭaiyāṭṭamāka-cellumāru-

8. kalppicceṭatt-ariyuṅ-tāḷkki Kokkopparappil Kanṭan-kanṭanum ariyum Tānamankoṭṭattu Keralañ-cuvaranum ariyum Punalūri Vikkiraman-paraṅṅavanum ariyum Paṭṭāḷi-k-Kōvintan-Kumaranum ariyum[|*]ip-paṭikk-ivai Kaitavāy-k-Kanṭan

9. Utayanan eḷuttu [||*]

12th: No. 7

TAS, III, pp. 28-29 c. 1196 A.C.

1. Svasti śrī [||*] Karkaṭaka-v-
2. Viyāḷattil-k-Kum-
3. pañāyiru 1 cenra ṅāḷ Mi-
4. ttirānantapurattu tekki-
5. n currumanṭapattil Brahma
6. prajñā-bhaṭārar-tiruvaṭi iru-
7. ntaruḷiyeṭattu Mittirānanta-
8. purattu paṭṭārakar ṅiyati iraṭ-
9. ṭaiyāl ṅānāḷi-ceytari tiruva-
10. [mi]rtu ceytaruḷuvān Venāṭṭa[ṭi]-
11. kaḷ Manikanṭa-Rāmavar[m]ma[r]ama-
12. cca pūmi [||*] Marutattūr Veḷḷarai vi-
13. [ru]ttiyil añconru Meloṭi
14. [peru]ṅ-ṅellum Koṭumannu-
15. [m Pe]rumannum Vileṅilattoṭi-
16. y pu[raiyiṭa]ṅṅaḷ munrinnum me-
17. l-p-pāti tiruvatti[ya]nu koḷḷuṅ-ṅel ṅālkkalamum Ce ..
18. ḷunti Nenmalimaṅṅa[la]ttu pūmi[mel] koḷḷum pāṭṭa
19. ṅel muppatu parayum kūṭa-k-kaikkonṭu celavu muṭṭāte vaip-
20. pic[cu] tirupparikalamum-eṭuttukonṭu dakṣanameru . . . .
21. . . . ññalattiyum-iṭuvatu Mittirānantapurattu vaiṣnavan
22. Rākavanārāyanan tantatipravecame ācandratāraval [||*] itu
23. orānṭu muṭṭukil muṭṭiraṭṭi [||*] iranṭānṭu muṭṭukil muṭṭiraṭ-
24. ṭiyuṅ-tanṭamum [||*] muvānṭu muṭṭukil ip-
25. pūmiyum purayiṭamum srīkāriyañceyyumava ra-
26. ḷ kaiyil i-k-kārānkūru (merpaṭi) Rākava-ṅārāyanan
27. atikariccu celavu celuttuvitu [||*] Paṭṭāḷi-k-
28. Kovintan-kumaranum ariyum [||*] Punalūri Vi-

29. kkiraman-paraṅṅavaṉum aṟiyum [||*] itu Kaitavāy-
30. k-Kaṇṭaṉ-uta-
31. yaṉaṉ eḻuttu [||*]

12th: No. 8
TAS, III, pp. 50-51 c. 1196 A.C.

1. Svasti śrī [||*] Syānandūraika goṣṭhāla-
2. ya kamaladṛśe Godamārttāṇḍa Goḷam-
3. bādhīśa-cchakravāhī dhanuṣi ca kṛtanaivedya-
4. muttuṁgajīve [|*] śrīmānādityarāmassa hi rajatakṛta-
5. ṇḍiṇḍimammandarābhaṇḍiṇḍīrākhaṇḍaṣaṇḍadyuti śu-
6. bhamidiśanmānya ānmā kṣamāyāḥ [||*] Karkkaṭa-v-Vi-
7. yāḻattil-t-Taṉu-ñāyiṟṟu [Ti]ruvā[na]ṅtapurattu
8. sabhaiyuñ-camañcitanum Padarāmabhaṭārar ti-
9. ruvaṭiyuṅ-kūṭi iruṅṅaruḷiy-eṭattu Maruti-
10. maṉ Āticca-rāmaṉ Tiruvāyamapāṭi-p-piḷḷai-
11. kku koṭṭuvāṉ veḷḷi-t-tiruvaṇakkattuṭiyu-
12. ṅ-koṭuttu ṅiyati maṭaiyāl iruṅāḷicceyt-ari
13. tiruvamirtu ceyyumāṟu kalpiccu koṭutta mū-
14. ṉṟu calākaiyum aḷakaccu muppatum (meṟpaṭi) yil me-
15. l-c-cāṅti ceyyuṅ-ṅampimāriṭaṅ-koṭuttu-p-po-
16. liyāl āṇṭuvaṟa koḷḷuṅ-ṅel [o]kkum paṟaiyāl
17. aṟupatu paṟai ceytuṅ-koṇṭu ācaṅdratāraval celavu
18. celutti varuvitu [||*] tiruvaṇukkattuṭi koṭṭumavaṉṉu
19. viruttikku meṟpaṭiyāṉ Pulavaram[pi]l Keraḷa-rāmaṉ-
20. ṉu kaṭaṅ-koṭutta mūṉṟu calākaiyum aḷakaccu patiṉañ-
21. ciṉṉum paṇaṅ-ṅāliṉṉum poliyāl aṇṭuvara paṅ-
22. kuṉi Uttarattiṉṉu Kuvaiyū[r]kkālil Ṅirmaṇṇa-
23. ṭi ṅilam patiṉoru paṟai vittupāṭṭālum puṟai k-
24. kūliyum nīkki Tiruvāyampāṭi maṇṭapattil-k-koṇ-
25. ṭuvaṅṅ-aḷavutaruṅ-ṅel okkum paṟaiyāl mup-
26. patu paṟai [||*] i-ṅ-ṅel oru tuṭai muṭṭukil i-ṅ-ṅilamum
27. mikku meṟpaṭiyārkuḷḷa pūmi puraiyiṭam epperppaṭṭa-
28. tuṅ-taṭuttu vilakki vaḷaiccuvaccu accum poliyum ta-
29. ṇṭikkoṇṭu piṉṉaiyum caratamāyi oraṭattu koṭuttu poli yu-
30. ṅ-koṇṭu cekoppaṇiyuñ-ceytuvaruvitu [||*] tiruvamirtu
31. oṉṟu muṭṭukil muṭṭiraṭṭi [|*] iraṇṭu muṭṭukil muṭṭira[ṭ]-
32. ṭiyuṅ-teṇṭamum [|*] mūṉṟu muṭṭukil sabhaiyuñ-camañci-
33. taṉum tiruvuḷḷamāyi teṇṭamum vaiccu muṭṭiraṭṭiyu[ñ]-
34. celuttuvitu [||*] i-t-tiruvaṇukkattuṭi Tiruvāyam[pā]-
35. ṭi uvaccaṉ Kāmaṉ-kiruṭṭaṉ taṅtati-p-piravecame
36. cekoppaṇi ceytu coṟuṅ-koṇṭu viruttiyil [ṅi]-
37. ṉṟu varuṅ-ṅellum aḷavu koṇṭu kuṟiyuṅ-koṭuttu

38. varuvitu [||*] i-c-celavu vaippāṉ koṭutta uruḷi oṉṟu [||*] itu
39. śrī Viṣṇubhaktaṉ Kaitaivāy-k-Kaṇṭaṉ-utaiyanaṉ eḻuttu [||*]

13th: No. 1

TAS, IV, pp. 67-8 Ko. 384: A.C. 1209

1. Svasti śrī [||*] Karkaṭakattil Viyāḻań-ńiṉṟa yāṇṭu Kollam 384.......
2. ḷāl Tiruvāṉańtapurattu sabhaiyuñ-camañcitaṉum Mittirāṉańtapurattu tek.......
3. ṉṉatiyil kūṭi iruńńaṟuḷiyeṭattu tiru Veṟāṭṭaṭikaḷ śrī-Vira-Irāmań.......
4. ṅka-p-Pallavaraiyaṉ Tiruvāṉuńtapurattu perumāḷukku tiru-v-amirtiṉ-ṉuń-t.......
5. ńāṉāḻiyilum oru brāhmaṇar amirtu cevattiṉu veṇṭum veñceṉam....
6. taṟaimel ńiccal ńaṭai pāṭṭamāḷumavaraḷ vāḻi perumāḷ paṟayāl aḷavuko........
7. toṅka-p-Pallavarayaṉṉ-oḷḷa Ceyyamaṉṉuń-Kaḷattūrum Ciṟaiyaṟamuñ Āḻuñ-Cai........
8. karaiyuń-karaippurayiṭattiṉ melum āṇṭuvaraiyum Paṅkuṉi Uttiratti........
9. ńiccal ńaṭavoṭu kūṭa-k-kuḻum-iṭṭu akattu pańtiraṭikku oru peru amirtu.......
10. per oro tiru-māla keṭṭi-c-cāṟttivaruvitu [||]* i-ń-ńl oṟu tuṭai muṭṭuki...............
11. ṭu aṭuttu muṭṭukil (deva?)svammu taṭuttu vaccu cellum aḷavu koḷvitu tańtati.......
12. m varukil śrī-pātamulam ceṉṟu tirtt-k-koṭup[p]itu ivai Kaitaivaḷākattu.............
13. ṉṟa yāṇṭu Kollam 385....................

13th: No. 2

TAS, IV, p. 71 c. 1214 A.C.

1. Makarattil Viyāḻań-ńiṉṟa Tulā-ñāyiṟṟu-c-ceyta aṭṭil-p-peṟṟolaikka[ra*]-ṉamāvitu [|*] Tiruveḷḷalūr tavai-p-potuvāḷ tańńaḷkkoḷḷa Tiruveḷḷalūr iraṇṭeṭat-
2. tum tiruppaḷḷittāmamuń-keṭṭi cārtti aviṭe vaṭakkiṉ teva[r*]kku pula-riye tirumotu ńāḻi mūḷakku-p-pacce pa-iru ńāḻiyum ańtipotu iru nāḻiyum
3. Kiḻapperūr ciri-vira-Irāmań-keraḷa-tiruvaṭi celaviṉu koṭutta muta[l*]-koṭuttu Paṉayūr Kaita akattu Kuḷańńaraikkal Kaṇṭań-ńeṭi [||*]

13th: No. 3

TAS, IV, p. 70 Ko. 390: 1215 A.C.

1. Svasti śrī [||*] Kumpa-v-Viyāḻattil-k-Kollam 389-tāmāṇṭaikk-etirām-āṇṭai Miṉa-ñāyiṟu 18
2. ceṉṟa Viyāḻam-āṇṭa Pūyamu-t-Tecamiyum Meṭamum āṉṟu Kiḻapperūr śrī-vira-Irāmaṅ-Keraḷavar-
3. mma tiruvaṭi Veṇāṭu vāḻṅtaruḷa śrī-vira-Irāmaṉ-Umaiyammai-y-āṉa piḷḷaiyār tiruvaṭi piratiṭṭai pa-
4. ṇṇicc-aruḷiya[tu*] [||*]

13th : No. 4

TAS, I, pp. 290-91 Ko. 393: A.C. 1218

1. Svasti śrī [||*] Tirukkaṇṭiyūr Mahādēvarkku sarvvāratit .... cey-taruḷi-c-cellāṅiṉṟa yāṇṭu 394-lām-ā-
2. ṇṭai Mēṭa-v-Viyāḻattil-k-Kollam 392-ṇṭām-āṇṭai-t-Tulā-ñāyiṟu 17 ceṉṟa Veḷḷi Aṉiḻam i-ṅ-ṅāḷ mutal
3. taḷi yāṇṭu 396-ṟām-āṇṭai Iṭapa-Viyāḻattu-y-i-k-kollam 393-ṟam-āṇṭai Mēṭa-ñāyiṟu 8 ceṉṟa ñāyiṟu Makai-
4. yiram i-ṅ-ṅāḷ[kuṭ]iṭaippaṭṭa kālattil-t-tiṅkaḷ 19-ṉāl ṅāḷ 53. . i-ṅ-ṅāḷ-i-k-Kaṇṭiyūr Mahādēvar tiruvuṭampu śrī pīṭamum
5. oḷaya śrī vimāṉamum avikkiṉaṟum viḷakkumāṭamum paṇicey-viccu tiru-k-kalacam muṭiccaruḷiya Oṭaṅāṭu vāḻṅtaruḷiṉṟa Utaicirama-
6. ṅṅalattu Śraviraperumaṟṟattu Irāmaṅ-Kōtavarmma tiruvaṭi tiruvuḷḷa-[ñ-ce]ytaruḷa-k-Kaṇṭiyūr-t-tēvaṭicci Kuṟuṅkuṭi Uṇṇikaḷattiram
7. irukka Vēṇāṭuṭaiya Kīḻappērūr .... pāppūr mūppu vāḻṅtaruḷiṉṟa Iravi-Kēraḷava . . . ma-tiruvaṭiyil ṅiṉṟu tiru-p-paṇi
8. ceyviccaruḷa i-p-paṇi ceyviccaruḷi ..... Oṭaṅāṭṭiṉṉu mūttatikārñceyta Peruṅṅali . . Akattaṅ-Koviṅṅaṉ-Cēṅṅaṉum
9. [ū]r paṭutti talattu Kōta-kēraḷaṉ .... atikāraṅ- Ku[ṟa]ṇṭīppaḷḷi-k Kēraḷaṅ-kumaraṉum . lai-y-eḻuttu Koṟṟaṉṉāṭṭu Ku-
10. ṉṟaṉ Āticcaṉum kīḻppaṇi Kāññirama . . . -k-Kōviṅṅañ-cuṅtaraṉum eḻuttu [||*] Kaṭuvūr Irāma [ṅku] ṉṟaṉuṅ- Nāṭṭukāriyamaṟṟattu
11. Kēraḷañ-cirikaṇṭaṉum Ve . . ka uḷḷiruṅṅu . . mai Irāmaṉ utaiyaṉaṉum Mēkūrkkum . . . . ṅāṭṭu Kāmaṅ-kotaiyum maṅ-
12. tira-v-ōlai eḻuttu Mullaiccēri-t-Tā[mōti]raṅ-kōviṅṅaṉum taḷi atikārañ-ceyta Ciri .... Eṉāti-kumaraṉum uḷḷīru-

13. ppu Muḻalumōṭi-k-Ku[ma]ra[ñ]- Ceṅṅaṉum paṇṭāra uḷḷiruppu Maṟaṅ-ṅāṭṭu Kōta-kōviṅṅaṉum puḷḷikkaṇakku Naṅtā-
14. maṉaiccēri Irāmaṅ-kaṇṭaṉum Kaṇṭiyūr mēleḻuttu Muttampaḷḷi Irāmaṉ-iraviyuñ-Cūḻavaḷḷoññāvalppaḷḷi-k-
15. Kumaraṅ-kōviṅṅaṉuṅ-tiruppaṇikkaṇakku Matimaṉ Vikkirama Āticca-ṉum kūṭi-t-tiruppaṇiyum muṭiccu tirukkalacamum ā-
16. ṭiccaruḷiyamaikku ivai Vikkiramaṉ Āticcaṉ eḻuttu[|| *] puḷḷikkaṇakku eḻuti tiruppaṇiceyvicca Naṅtāmaṉaiccēri-
17. Irāmaṅ- kaṇṭaṉ eḻuttu [||*]

13th: No. 5

TAS. III, pp. 41-42 Ko. 339: A.C. 1224

1. Svasti śrī [|| *] Viriccikattil-v-Viyaḻaṅ-ṅiṉṟa yāṇṭu Kolla[m*] 399-tām-ā[ṉ *]ṭai Makara-ñāyiṟṟu-c-ceyita kāriyam-āvitu [|| *] Veṇāṭu vāḻṅta-ruḷukiṉṟa śrī-Vira-Keraḷavarmmar tiru-
2. vaṭikk-amañca atikāraruṭaya Teṅṅaṅāṭu civitattil Nikamattūrakattu āṇṭuvarayuṅ-kaṭamaiyāl-k-koḷḷuṅṅel 217 (?) ñ-ceytum-aḻakerutu-ṅ-ṅeyyuṅ-taḻai-
3. kkāṇamuṅ-Tiruvallattu Mātevarkkuṅ-Tirukkaṇṇappaṉṉuṅ- Kaṇapatik-kuṅ-ṅamakkārattiṉṉuṅ-ṅiyatamum attāḻa-t-tiru-v-amurtu ceyyumāṟu kalppicca
4. ari maṭai 7-ṅāḻiyum iraṇṭiṭattuṅ-tiruvaṟai vātilkkal orotiṅkaḷ orottili-c-cellumāṟu kalppicca tipa-mālaikkuṅ-kūṭa eḻu-
5. ti-k-koṭuttār-atikārar [|| *] i-k-kūṟu mutalā[y *] Mātevarkkari iru ṅāḻi Tirukkaṇṇappaṉṉ-ari iru ṅāḻi Kaṇapatikkari ṅāḻi ṅamaskārattiṉṉ-ari iru-
6. ṅāḻi [|| *] itiṉṉu Melkkāṭṭu Cokiyār kūṭṭikkoṭutta accu 8-ṉṉum poliyāl-oḷḷa mutaluṅ-kūṭa Nārāṇatātar kaikkoṇṭu celutti-t-tām vilaikoṇ-
7. ṭa Aruviyūr-p-purayiṭattil-t-tiruṅaṅtāvaṉamuñ-camaiccu muṉṟeṭattum īraṇṭu tirumālayuñ-cārtticcu coṟumeṭuttukoṇṭuvaruvitu [|| *] Nārāṇa-
8. tātar ipparice ṅikamattu kaṭamai ṅel 217-mum-aḻakerutu ṅeyi taḻaikkāṇa-mum-accu 8-ṉ poliyuṅ-Nārāṇatātar āṇṭuvarai aṟu ti-
9. ṅkaḷ vāramuṅ-koṇṭu kuṟiyuṅ-koṭuttu celavuñ-celutti-t-tiruṅaṅtāvaṉa-muṅ-tiru-mālayun dīpamālayuñ-celutti varuvitu [|| *] Nārāṇa-
10. tātariṟ piṟpākam sabhaiyum piḻāra-tiruvaṭiyum cōkikaḻkkuṅ-tiruvuḷḷa-māyavarai-koṇṭu i-v-vaṇṇamē ācandratāraval cellu....[1]

1. The editor thinks that *cellu* is a scribal error for *celavu* and that some word like *ceyvatu* or *celuttuvatu* is omitted to be engraved at the end.

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ABBREVIATIONS

1. *Books, papers and periodicals :*

BDCRI	..	Bulletin of the Deccan College Research Institute.
BSOS	..	Bulletin of the School of Oriental and African Studies.
CGD	..	Comparative Grammar of the Dravidan Languages (by CALDWELL).
EI	..	Epigraphia Indica.
EMM	..	Evolution of Malayāḷam Morphology (by L. V. Ramaswami AIYAR).
GL	..	Grammar in Līlātilakam (by L. V. R. AIYAR).
GML	..	Grammar of the Malayāḷam Language (by H. GUNDERT).
HGOK	..	Historical Grammar of Old Kannaḍa (by G. S. GAI).
HGT	..	History of Grammatical Theories in Tamil (by P. S. Subrahmanya SASTRI).
IA	..	Indian Antiquary.
JAOS	..	Journal of the American Oriental Society.
JOR	..	Journal of Oriental Research, Madras.
L, LīL.	..	Līlātilakam.
MOTV	..	Morphology of the Old Tamil Verb (by L. V. R. AIYAR).
N	..	Naṉṉūl.
PMP	..	Primer of Malayāḷam Phonology (by L. V. R. AIYAR).
QJMS	..	Quarterly Journal of the Mythical Society.
SII	..	South Indian Inscriptions.
TAS	..	Travancore Archaeological Series.
TC	..	Tolkāppiyam Collatikāram.
TE	..	Tolkāppiyam Eḻuttatikāram.
V	..	Vīracōḻiyam.

2. *Grammatical terms* :

abl.	.. ablative.	masc.	.. masculine.
acc.	.. accusative.	nom.	.. nominative.
dat.	.. dative.	neut.	.. neuter.
ep.	.. epicene.	pl.	.. plural.
fem.	.. feminine.	pple. n.	.. participial noun.
gen.	.. genitive.	rel.	.. relative.
hon.	.. honorific.	sg.	.. singular.
instr.	.. instrumental.	v.b.	.. verb base.
loc.	.. locative.		

3. *Miscellaneous* :

IA	.. Indo-Aryan.	Skt.	.. Sanskrit.
inscr (r).	.. inscription (s).	Slw.	.. Sanskrit loan-word.
Mal.	.. Malayāḷam.	Tam.	.. Tamil.
Pkt.	.. Prakrit.		

A CONTRIBUTION TO THE STUDY OF SPEECH STRUCTURE

by

C. R. SANKARAN

[Abstract: —

In the following pages an attempt at the construction of a geometrical-physical theory of speech-structure is presented. This theory starts from exceedingly elementary considerations which form the various bricks of the construction, against the background of the other and older approaches to this self-same question by scientists like HELMHOLTZ and his followers on the one hand, and later E. W. SCRIPTURE and A. GEMELLI on the other.]

In addition to what I have written in my recently published work[1] on my programme for a theory of speech-structure, I may say here that the present attempt should be more correctly described as a venture with ideas[1a] and a deliverance,[1b] and as a modest pioneering work on the subject it is inevitable that on some points it may not appear to be quite intelligible, seeming as a mathematical *tour de force* even as MILNE's Kinematic Relativity may be judged (as RUSE observes).[1c] In the following pages, a further clarification of my theory is therefore attempted.

The conception due to HELMHOLTZ in regard to the question of speech-structure held sway until recently. Usually this has been known as the "Characteristic Resonance Region Theory", due to D. C. MILLER and others like OBATA in Japan, and STEINBERG in America.

This theory is particularly concerned with the physical structure of vowels. The assumption that the components of vowels stand in harmonic relation to one another is at the basis of this view.

Prof. E. W. SCRIPTURE of Vienna in recent times challenged the whole explanation of vowel quality in terms of characteristic frequencies. Through his study of the waveforms, he concluded that the vowel character depends on the general shape of the "Vibration Profile", and he concluded also that any

1. C. R. SANKARAN: *Phonemics of Old Tamil, Deccan College Monograph Series,* No. 7, 1951, Poona, p. 3, first para.

1a. Cf. Kenneth WALKER's book of this title, London 1951, pp. 10-11. Also see E. A. MILNE, *Relativity, Gravitation and World-Structure,* Oxford, at the Clarendon Press, 1935, pp. 3-4.

1b. Cf. Trigant BURROW, *The Neurosis of Man,* London, 1949, p. xvii, Author's Foreword.

1c. RUSE, *Nature,* 163, 1949, p. 931.

frequencies of any kind may be present provided they give the same general form of profile.

Prof. A. GEMELLI in Italy, an eminent experimental psychologist, in collaboration with a biologist, Prof. G. PASTORI, not to speak of another scientist —an acoustician Prof. G. SACERDOTE—and Prof. Francesco VERCELLI, a mathematician of eminence, adapted a mathematical method which is said to have amply proved already its effectiveness in other fields of research, to the analysis of speech-sounds.

Prof. A. GEMELLI has done very important electro-acoustical investigations in the study of speech-structure, by adapting the new technique of VERCELLI method originally intended for application in the study of some meteorological phenomena, to the "wave-form analysis" in the study of speech-structure. This method of VERCELLI which measures the apexes or the peaks and the depths of the interior waves interpreting the results as amplitudes of component harmonic sine waves, is superior to that of the *ordinary* Fourier analysis, which until the investigations of Profs. E. W. SCRIPTURE and A. GEMELLI was thought to be the only mathematical analysis that could be successfully applied to the vowel curves in the field of physical phonetics.[1d] The analysis due to VERCELLI unlike the ordinary Fourier analysis provides for all frequencies and not the few harmonic ones alone. Prof. E. W. SCRIPTURE contends that the analysis is not applicable with reference to the vowel-curve which are decremental; the wave-form suddenly fades and shoots up here. He points out that the VERCELLI analysis can be applied only to non-decremental curves, such as those of a number of travellers on a railway, or drawings in a lottery. The work of Profs. SCRIPTURE and GEMELLI marks a departure from the older approach due to HELMHOLTZ and others towards the problem of speech-structure.

In the wake of the work done by Profs. SCRIPTURE and GEMELLI, the present geometrical-physical theory known technically as the alpha-phoneme theory, is constructed. It is based on two simple fundamental assumptions :—

1. That the vowel and the consonant must be capable of precise positive definition in mathematical terms.

2. That the consonant and the vowel are mutually exclusive only on arbitrary grounds.

1d. For auto-correlation analysis of speech-sounds see K. N. STEVENS, JASA, Vol. 22, 1950, pp. 769-771. Vercelli analysis is in essence *not* different from what may be called an *ordinary* Fourier Analysis, except in the matter of some more details.

The latter assumption is based both on the experimental evidence furnished by the Japanese scientist Prof. A. Tanakadate and the pioneering X-ray studies on the side of physiological phonetics by scientists like G. Oscar Russell in Ohio State University in America, and others. These studies have revealed the importance of the 'articulation place' of the vowels, as compared to the relative unimportance of the dimensions of the cavities. Such a conclusion brings together vowels and consonants in human speech, the difference being a gradual one and emphasises the only arbitrary distinction which exists between the vowels and the consonants. It must be here borne in mind that in the work of the earlier scientists until the advent of the present geometrical-physical theory, the assumption of the absolute distinction between these two speech-elements, broadly speaking, was implied if not explicitly, at least implicitly.

Prof. E. W. Scripture has particularly provided the physical basis of the present geometrical-physical theory, concerning speech-structure. The present theory does not deal with the bulk properties of speech-elements and this approach marks the theory very distinct from the earlier approaches to the problem. It has already been shown that according to the view of Prof. Scripture it is the general shape of the 'vibration profile' which enables us to recognise any particular vowel as such. Scripture's profile theory is now extended and put in a more generalised form in the present geometrical-physical theory.

The 'profile theory' of Prof. E. W. Scripture tells us that a physical profile is not a sum of a few discrete free vibrations as they are ordinarily supposed to be, but an integration of an infinite number of vibrations differing infinitely little from one another; it is a continuous process. Now these infinite number of vibrations differing infinitely little from one another are defined as 'elemental profiles' in the present theory.

In any consonant-vowel configuration during actual utterance when the acoustico-articulatory interval is zero in time, these 'elemental profiles' form a densely ordered set and in this continuum by means of any physical experiment even with the highest degree of precision so far attainable, we cannot mark the change-point, i.e., we cannot say where the consonant ends and where the vowel begins with any degree of mathematical accuracy. At this junction-point, a conceptual limit known as the Weierstrass-limit is defined according to the present theory in the familiar manner of Dedekind's postulate.[1e] This 'conceptual limit' is known as the alpha-region. It is a mind-construct. It is both the vowel and the consonant and it is a pure mathematical

1e. See Ernst Cassirer, *The Problems of Knowledge*, New Haven, Yale University Press 1950, pp. 68-69 and p. 75. Cf. also, Willard Van Orman Quine, *Mathematical Logic*, New York, W. W. Norton and Company, Inc., Publishers, 1940, p. 271; A. N. Whitehead, *Essays in Science and Philosophy*, Axioms of Geometry, p. 183, Rider and Company, 68 Fleet

fiction. It is an auxiliary idea for the purpose of visualization. This particular method of conceiving apparently fits the situation and is obviously very neat. It is a negative form of thinking to conceive that this alpha is a strong pointer towards the positive definition of the vowels and the consonants. The alpha-phoneme as this conceptual region is called for some technical reasons, has been conceived only as a representation. In its first formulation[2] it was

Street, London, E. C. 4, New York-Melborne-Sydney-Cape Town, 1948. See also footnote 7 *infra* and *Phonemics of Old Tamil*, pp. 34 and 38. "What is characteristic of the individual real number α is the cut which it creates in the domain of rational numbers by dividing all fractions m/n into three classes, those which are: (1) less than α (2) equal to α and (3) greater than α." Hermann WEYL, *Philosophy of Mathematics and Natural Science*, Princeton University Press, 1949, Second Printing 1950, pp. 39-40.

Cf. also Werner HEISENBERG, *The Physical Principles of the Quantum Theory*, Translated into English by Carl ECKART and Frank C. HOYT [Dover Publications, Inc., 1930], Article 1, The Uncertainty Relation for Waves, pp. 48-49 and also Article 9, Quantum Theory of Wave Fields, pp. 165-172. For Dedekind's partitions, see James PIERPONT, *Lectures on the Theory of Functions of Real Variables*, Vol. I, Boston, U. S. A., 1905, pp. 82-85. Cf. also, Leon CHWISTEK, *The Limits of Science*, London, Kegan Paul, 1948, pp. 74-75, and p. 143 and Bertrand RUSSELL, *The Principles of Mathematics, London.* Second ed., reprinted 1950, pp. 278 ff. and p. 438.

Cf. also Max BLACK, *The Nature of Mathematics*, Kegan Paul, London, 1933, pp. 95-97, especially pp. 96-7 and footnote 1 on p. 97. [The quotation from DEDEKIND'S *Stetigkeit und Irrationale Zahlen*, as given below, is from Max BLACK's work here with his own English translation.]

('It is interesting to see that DEDEKIND himself appears to have been well aware of the provisional nature of his definition. He says: 'Die Annahme dieser Eigenschaft [i.e., continuity as defined by the existence of real numbers] der Linie ist *nichts als ein Axiom* durch welches wir erst der Linie ihre Stetigkeit zuerkennen, durch welches wir Stetigkeit in die Linie hineindenken. Hat überhaupt der Raum eine reale Existenz, so braucht er doch nicht notwendig stetig zu sein; unzählige seiner Eigenschaften würden dieselben bleiben, wenn er auch unstetig wäre. Und wüsten wir gewiss, dass der Raum unstetig wäre, so könnte uns doch wieder nichts hindern, falls es uns beliebt, ihn durch Ausfüllung seiner Lücken in Gedanken zu einem stetigen zu machen; diese ausfüllung würde aber in einer Schöpfung von neuen Punkt-Individuen bestehen und dem obigen Princip gemäss auszuführen sein' (*Stetigkeit u. irrationale Zahlen*, p. 11 ff.).

"The assumption that a line has this property [continuity defined by the existence of real numbers] is no more than an axiom by which the continuity of the line is recognised, or by which the line is conceived, in our thinking, to possess continuity. If space has any real existence at all, it need not be continuous, for innumerable properties would remain the same if it were discontinuous. And even if we were certain that space was discontinuous nothing could prevent us, if we pleased, from making it continuous by conceiving its gaps filled; such a process would consist of creating new points and would have to proceed in accordance with the above principle [i.e., the definition of real number]."

In the light of the above passage it can appear now that in my monograph *"Phonemics of Old Tamil"* (pp. 37-9), I have only extended this argument of DEDEKIND applying it to *time* (cf. the addendum I to this paper). It is refreshing to note here DEDEKIND's anticipation, albeit the fact that he refers only to *space*.

2. C. R. SANKARAN, On Defining the Alpha-Phoneme, *Current Science*, Vol. 13, 1944, pp. 11 and 12.

not indicated as to what physical idea it may thereafter point or into what it will resolve itself. It was merely a 'representative' idea. At that time this continuum of the 'elemental profiles' forming a consonant-vowel configuration implying the acoustico-articulatory interval of zero in time was also presented as unidimensional for certain purposes of special scientific convenience. But now the recent electronic device of the Bell Telephone Laboratories, known as the Visible speech Apparatus gives a linear display of patterns of speech. Such patterns may be varied in form by modifying the portrayal of any or all of the three basic dimensions—frequency, time and amplitude. This helps us easily to conceive our 'elemental profiles' as three dimensional.[3] And, therefore, in the present form of the alpha-phoneme theory the components of articulation, which is a three-dimensional complex, are having strict one-one relation with the components of the sound-waves. This is a distinct improvement over the older conception according to which the sound-waves were considered unidimensional, an implicit assumption which was behind the application of Fourier analysis by earlier scientists and even its rejection by later workers like SCRIPTURE. The present theory therefore suggests towards a unification, if not at least an harmonization, of both the physiological and physical approaches towards the problem of speech-structure. The three-dimensional continuum which again for certain purposes of scientific convenience it is taken to be, though it is strictly speaking a four-dimensional continuum, is conceived as an infinitely structured space congruent with time; logically a part of time is congruent with itself. In this continuum, the rela-

3. SCRIPTURE's formulae involving triple integration reveals the three-dimensional character, but a marked emphasis is not placed by him even as by others, on this. See in this connection E. W. SCRIPTURE, The Nature of the Vowels, *Archives Néerl. de Phonét. Expérim.*, Tome 7, pp. 64-70, especially pp. 68 and 89.

Modern investigators have no doubt in a refreshing manner attacked the problem. Cf. "A fundamental question in experimental phonetics is whether sustained vowel sounds which are judged aurally to be phonetically equivalent have similar organic formations (and thus similar acoustical patterns), or whether they have similar sensory patterns after the signals have passed the non-linearities and the transformations of the auditory apparatus". Gordon E. PETERSON, The Phonetic Value of Vowels, *Language*, vol. 27, No. 4, Oct.-Dec., 1951, p. 547.

In fact, I would like to recommend the interested reader to section 3 (the Vowel Diagram and Phonetic Value) in entirety of this able paper (*ibid.*, pp. 547-57). But even such works like this as well as DELATTRE's (Cf. for instance, *French Review*, 21, 477-84, 1948 also S. H. CHANG, G. E. PIHL, and J. WIREN, The Intervalgram as a Visual Representation of Speech Sounds, JASA, Vol. 23, pp. 675-9), apparently are written on the assumption that "facts by themselves can and should yield scientific knowledge without free conceptual constructions" (cf. footnote 21a). Such a conceptual construction is provided by the alpha phoneme theory according to which the *acoustical time* and the *articulatory time* are *not* equal to (cf. *Deccan College Monograph Series* 7, 1951, pp. 35-7) each other even when measured from a common origin. (Cf. also C. T. K. CHARI: *The Philosophical Quarterly*, Vol. 23, p. 6).

tion of magnitude between successive elements is disregarded, and the sequence here consisting of 'elemental profiles' involves only arrangement. The 'elemental profiles' forming really speaking a four-dimensional continuum have a biunique correspondence[4] with a part of time itself.

This infinitely structured space, in other words, is really speaking a spatialised time which is only conveniently looked upon as space, for we cannot separate space and time.[5] 'Events' here are superposed aggregates of observations constructed in an unbounded and unlimited region of the other type of time conceived as such only as a matter of convenience, in the strictly topological sense,[6] topology being a noble branch of mathematics dealing with spatial relations. Here it must also be pointed out that non-Euclidean conceptions are involved in the present theory, space being conceived in the post-Riemannian sense. At the junction point, namely the conceptual alpha-region in our continuum, we may tentatively speculate that the infinitely structured space meets time, assuming that our continuum is only a three-dimensional-space continuum which it is not in reality. The logic of mathematical reasoning here leads to the implication of non-linearity which means that the alpha-region is not within the time-process[7] being an unobservable, and is therefore incapable of being interpreted as an ordinary sensory experience. This is the epistemological implication of the present theory concerning speech-structure.[8] The physical knowledge of speech-universe is

4. For the idea of sets having biunique correspondence in Cantorian sense, see R. Courant and H. Robbins, *What is Mathematics?*, Oxford University Press, London-New York-Toronto, p. 79.

5. See A. A. Robb, *A Theory of Time and Space*, Cambridge, at the University Press, 1914, p. 9.

6. Cf. Solomon Lefschetz, *Introduction to Topology*, Princeton, New Jersey, 1949, for connected sets, pp. 33-34.

Cf. also in this connection George D. Birkhoff, *The Mathematical Nature of Physical Theories, The Society of the Sigma XI*, Devoted to the Encouragement of Research in Science National Lectureships 1943 and 1944. *Science in Progress, Fourth Series*, pp. 120-149, especially p. 149, New Haven, Yale University Press, 1946.

7. Cf. "Kinematic relativity agrees with the essence of Lemaître's hypothesis in tracing the state of the Universe backwards to a point-singularity, before which there was neither space nor time nor becoming; and J. B. S. Haldane's related speculations at least show how some of the most rigorous minds of today are reacting in the same sense. The one thing that Kinematic relativity insists on with regard to this singularity is that no propositions can be asserted about the state of affairs at that epoch; it is transcendent, as becomes the event of the creation of the universe." E. A. Milne in his review of Prof. Georges Lemaître L'Hypothèse de l'Atome Primitif, *Nature*, Vol. 163, June 4, 1949, p. 856.

For Milne's conception of electrons being point-singularities, see H. S. Ruse's review of E. A. Milne's *Kinematic Relativity*, Oxford at the Clarendon Press, 1948, *Nature*, Vol. 163, June 18, 1949, p. 932.

8. C. R. Sankaran, Epistemology and the Alpha-phonoid Theory, and A Note on the Epistemological Implications of the Alpha-Phonoid Theory *infra*, pp. 241-7.

relative to consonant and vowel partition even as all physical knowledge is relative to space and time partition. Our alpha-region corresponds to the concept of the dimensionless parameter in MILNE's Kinematic Relativity.[9]

The alpha-phoneme theory is therefore a geometrical physical theory which is tantamount to the logical analysis of our intuitions of space and time once again from the view-point of our freshly opened studies of speech-structure. In short, the present theory is an attempt at the study of speech-structure based on a combined geometrical conception but amplified into a comprehensive physical theory by the addition of other notions and postulates consistently interpretable in connection with the geometry, but at least not known to be definable or deducible from it. Since particular contacts with experiments are concerned with these additional assumptions as well as with the main geometrical basis, it is conceivable that adaptation to results of observation may require, and be attainable by changes in some of these without departure from the general programme. A general survey of the geometrical material available for physical interpretation, giving the extent to which physical theory can be absorbed into that interpretation or superposed upon it with a view to indicate clearly at which points it appears that there is some flexibility of possible choice in certain of the auxiliary postulates, is a necessity. Now there are two types of physical investigations intimately related to the present geometrical theory concerning speech-structure. The one is a more indirect approach, what might be described as the verification of the theory. It speaks of the derivative consequences of the theory.[10] However these observational predictions play a minor part so far as the geometrical theory is concerned. But it is claimed that a better insight is gained now into the constitution and properties of what are known as semi-vowels and diphthongs. Many physical phenomena connected with human speech get more satisfactory explanation than it has received from other investigators so far. The cluster consonants contracting in the aggregate from the sum of their individual durations under certain conditions, is an instance in point.

The second kind of physical investigation deals with the more direct approach to the geometrical theory. It concerns itself with the determination of the minimum interval experimentally approachable to the theoretical absolute zero in time in our consonant vowel configuration which is the starting point of our investigations. This interval is taken on a deductive

9. E. A. MILNE, *Kinematic Relativity*, pp. 8-9.

10. C. R. SANKARAN and S. SOURIRAJAN, The Utterance Continuum and the Alpha-phoneme, BDCRI, Vol. 6, pp. 1-52. A Physico-physiological Theory of Syllables in Human Speech, BDCRI, Vol. 6, pp. 235-250. An Introduction to the Study of the Physical Dynamics of Vowels and Consonants, BDCRI, Vol. 7, pp. 249-253.

logical (theoretical) level as an *a priori* convention. The new electronic device known as the Visible Speech Apparatus of the Bell Telephone Laboratories has been already mentioned.[11] This device gives the sweep-rate of 333 per second.[12] The time interval between two successive sweeps is 3 milliseconds. As this interval is very much smaller than any time significant in the production of speech sounds and therefore the 333 per second sweep-rate is fast enough to assure that no significant speech detail fails to be portrayed, it is now assumed that very probably this is the interval capable of being determined by experimental means, approaching the theoretical absolute zero in time in our consonant-vowel configuration.[13] It is suggested that some such experimentally determinable interval approaching to the theoretical interval, preferably the so-called *Āytam*-phenomenon in speech with which the present investigations first originated nearly ten years ago, can serve as

11. R. K. Potter, G. A. Kopp and H. C. Green, *Visible Speech*, New York, Van Nostrand Company, Inc., 1947.

Technical Aspects of Visible Speech, Monograph B-1415, Bell Telephone System, Technical Publications, Reprinted from JASA, Vol. 18, 1946, pp. 1-89.
R. K. Potter and G. E. Peterson, The Representation of Vowels and their Movements, JASA, Vol. 20, 1948, pp. 528-535.
R. K. Potter, Analysis and Representation of Complex Waves, Review of Acoustical Patents, JASA, Vol. 20, 1948, pp. 720-721.
W. Koenig and A. E. Ruppel, Quantitative Amplitude Representation in Sound Spectrograms, JASA, Vol. 20, 1948, pp. 787-795.
L. G. Kersta, Amplitude Cross-Section Representation with the Sound Spectrograph, JASA, Vol. 20, 1948, pp. 796-801.
Walter Koenig, Analysis and Representation of Complex Waves, Review of Acoustical Patents, JASA, Vol. 20, 1948, p. 888.
R. K. Potter, Translation of Visual Symbols, Review of Acoustical Patents, JASA, Vol. 20, 1948, p. 888.
R. K. Potter, Objectives for Sound Portrayal, JASA, Vol. 21, pp. 1-5.
R. C. Mathes, A. C. Norwine and K. H. Davis, The Cathode-ray Sound Spectroscope, JASA, vol. 21, pp. 527-537.
Martin Joos, Acoustic Phonetics, *Language*, Vol. 24, No. 2, Supplement, pp. 71-2, 101.
Kenneth L. Pike, On the Phonemic Status of English Diphthongs, *Language*, Vol. 23, p. 157, footnote 15.
Leigh Lisker, The distinction between [ε] and [æ] — A Problem in Acoustic Analysis, *Language*, Vol. 24, p. 397, footnotes 1, 2 and 3.

Cf. Pierre Delattre, The Physiological Interpretation of Sound Spectrograms. PMLA, Vol. LXVI, No. 5, September, 1951, pp. 864-875. (See specially footnote 2 on page 864). Cf. too, C. R. Sankaran, *Phonemics of Old Tamil, Deccan College Monograph Series*: 7, Poona, 1951, p. 21 (the last para of article 8 and footnote 48) and also p. 33 (the last para of article 15).

12. R. R. Riesz and L. Schott, Visible Speech Cathode-ray Translator, JASA, Vol. 18, 1946-47, p. 56.

13. C. R. Sankaran, The Problem of the Structure of the Vowels and the Consonants in Human Speech, BDCRI, Vol. 9, 1948, pp. 192 and 193. See also footnote on p. 187.

a unit or standard "environment" called the *alpha-phonoid,*[14] in terms of which all other "environments" in speech could be measured. It is conceived that the alpha-phonoid can be given as a characteristic value differential equation. Definition of such "environments" in music too, particularly in the melodic structure of Indian Music, is also envisaged.[15]

For the first time based purely on the lines of negative mathematical thinking, an altogether new approach to the problem of the ultimate structure of speech-elements is inaugurated through the present geometrical-physical theory which involves the fascinating idea of continuous spectrum.[16]

In whatever way E. W. SCRIPTURE has taken the physical 'profile' of speech-sound to be (obviously he conceived it in relation to time only), it is really four-dimensional. Dimensionality is not a metrizable concept. Although dimensionality can be defined for a Hausdorff space in the MENGER-BROUWER fashion, it is exceedingly difficult to state theorems.[16a] CANTOR'S one-one correspondence between the points of a line and the points on a plane and PEANO'S 'space-filling curve' (continuous mapping of an interval on a square)[16b] contradict the usual ideas of dimensionality.

One is very familar with the distortion (or illusion) of a three-dimensional entity, projected and seen on a two dimensional plane, although for convenience such a procedure is even felt necessary many a time.

"If we perceived only two dimensions instead of three it would be almost impossible to assure oneself that time flows uniformly. Indeed, let us suppose that a distant mobile body travels along a path in the plane of our

14. C. R. SANKARAN, The Theory of the Alpha-phonoid (A Study of Speech-Structure), BDCRI, Vol. 10, pp. 61-7. The Abstract of this paper appeared in the *Proceedings of the 36th Indian Science Congress*, Allahabad, Part III, p. 213.

15. C. R. SANKARAN and B. Chaitanya DEVA, Postulational Methods and Indian Musicology, *Journal of the University of Bombay*, September, 1949, Vol. 18, New Series, Part 2, Arts Number (24), p. 78, footnote 18. B. Chaitanya DEVA, the Psychology of the Drone in Melodic Music, BDCRI, Vol. 10, submitted to the 37th Sessions of the Indian Science Congress, Poona. pp. 64-84.

16. C. R. SANKARAN, The Problem of the Structure of the Vowels and the Consonants in Human Speech, BDCRI, Vol. 9, p. 190, footnote cf. also C. R. SANKARAN and P. C. GANESHSUNDARAM, Time and speech-structure, *Abstracts, Proc. 40th Session of Indian Sc. Cong.*, p. 231. The entire paper will be published in BDCRI, same volume, subsequent issue.

16a. Cf. Solomon LEFSCHETZ, *Introduction to Topology*, Princeton New-Jersey, 1949, Princeton University Press, pp. 31, 123, 126-127, 117 and 207. (For *Dedekind cut* see page 27); see also Richard G. COOKE, *Infinite Matrices and Sequence spaces*, Macmillan and Co., Ltd., London, 1950, p. 315.

Cf. C. T. K. CHARI: Time as Minkowski's "Fourth Dimension", *The Astrological Magazine*, Vol. 41, No. 1, January 1952, Annual Number, (pp. 27-32), esp. p. 30, footnote 40.

16b. See my Monograph on Old Tamil Phonemics, footnote 102a.

vision. Let us suppose for example, that we are examining the movement of a body on the earth from a great height, say from the moon. If this body—a marble for instance—covers equal distances in equal times, we cannot infer that its movement is uniform, for by definition, we have no means of knowing if the ground on which the marble rolls is rigorously plane. Should this not be the case, if there are hollows and bumps, ascents and descents, we can not speak of equal distances as we do not know the value of the angles of the route in the plane of observation. A yardstick appears to be only 3·6 inches if looked at from a certain angle. In this case, if an ant takes two minutes to go from one end to another of this yardstick we will be under the impression that it has taken 2 minutes to cover 3·6 inches, this is at a rate ten times lower than the reality."[17]

Now, our consonant-vowel configuration, is an infinite series of four-dimensional acoustico-articulatory events (to which no actual events, as we can think of, correspond).[17a] We can think of only a time interval of zero 'between' the consonant and the vowel in our configuration. It is really speaking a 'four-dimensional interval'; naturally, it is not easy for us to conceive this. We ought, therefore, to move into the 'four-dimensional continuum' to understand the real nature of our acoustico-articulatory events even as a hypothetical observer in the moon seeing a scenic railway on earth as a simple railroad should move in the third dimension to detect the undulations.[18]

If to understand the real nature of the acoustico-articulatory events is not so easy, much less easy it is to conceive a 'cut' in the four-dimensional interval 'between'.[18a] For, it is *dimensionless*. Therefore, the whole thing boils down to this:

"The fourth dimension only represents the *existence* of the three others, the existence of the trihedron or any other system of reference. It simply indicates the *birth* in our consciousness of the notion of the three-dimensional space."[19]

17. Lecomte Du Noüy, *Biological Time, Methuen* & Co., Ltd., London 1936, pp. 134-5.
17a. See footnote 81 of *Phonemics of Old Tamil.*
Cf. "'Point-events' are world-points, i.e., neighbouring points in space, envisaged at infinitely neighbouring moments in time (dx_4). One point in space at t and the other neighbouring point in space at $t + \Delta t$."
Cf. Erwin Schrödinger, *Space-Time Structure*, p. 74 and also p. 76, Cambridge at the Univ., Press, 1950.
18. Lecomte Du Noüy, *ibid.*, p. 135.
18a. "The linear series taken together, stand as coordinates in a continuum of three dimensions". (Cf. footnote 90, p. 34, *Phonemics of Old Tamil*).
19. *ibid.* p. 133.

So to understand the real nature of the acoustico-articulatory events, we have necessarily to change our perspective. But the alpha-phoneme, being 'dimensionless', is so difficult to conceive and is subjective on the lines of those familiar arguments of EDDINGTON met with in his *Philosophy of Physical Science*[20]

Now, the question very naturally arises: how to make this knowledge communicable ? Herein lies precisely the exact significance of the alpha-phonoid concept (the generalised *Āytam*-phenomenon in speech)[21] which is an *a priori* convention for idealised signalling.

It is the structure represented by a differential equation in the physically determinable interval approaching the theoretical zero between the consonant and the vowel in our CV—configuration. In terms of this *environment* alone, all environments in speech can be defined; vowels and consonants can then be derived as boundary conditions in positive terms. Hence the vowels and the consonants losing their supposed absolute distinction on which the pragmatic phonetician still operates (being concerned only with this limited conception),[21a] from the point of view of this new perspective, gain

20. Cambridge at the University Press, 1939, pp. 63-66 referred to in footnote 71 of my Monograph on Old Tamil Phonemics.

21. Cf. The Alpha Phonoid Theory, BDCRI, Vol. 10, p. 66. Also *Phonemics of Old Tamil* footnote 3.

21a. I am not unaware that an 'absolute distinction' between vowels and consonants has not always been maintained by respectable scholars from W. D. WHITNEY to Kenneth PIKE, as it was reported to me by William R. PARKER of the Modern Language Association of America in his letter (to me) of 11th April 1950, as one of the criticisms of my work! I may here cite an instance; the difficulty of defining vowels and consonants exclusively in terms of acoustic and articulatory characteristics has led PIKE particularly to define a *vocoid* as "a sound during which the air escapes from the mouth over the center of the tongue, without friction in the mouth" (Kenneth L. PIKE, *Phonemics, A Technique for Reducing Language to Writing*, University of Michigan Publications, Linguistics, Vol. III, Ann Arbor—University of Michigan Press, 1947, p. 60).

All that I maintain merely amounts to this: that, in practice, the empirical phonetician still acts in such a manner as though he believes in the validity of an 'absolute distinction' between vowels and consonants! (Cf. C. R. SANKARAN, *Phonemics of Old Tamil*, Deccan College Monograph Series, No. 7, 1951, pp. 20-21. See also p. 27).

Now to adopt here the words of A. EINSTEIN (used by him while referring to the antipathy of scholars like OSTWALD and MACH towards atomic theory, which in his own words " can indubitably be traced back to their positivistic philosophical attitude "), " this is an interesting example of the fact that even scholars of audacious spirit and fine instinct can be obstructed in the interpretation of facts by philosophical prejudices. The prejudice — which has by no means died out in the meantime — consists in the faith that facts by themselves can and should yield scientific knowledge without free conceptual construction. Such a misconception is possible only because one does not easily become aware of the free choice of such concepts, which, through verification and long usage, appear to be immediately connected with the empirical material " (A. EINSTEIN, Notes

an added significance, to say the least. This approach is, therefore, very much different from the entire phenomenological approach hitherto obtained in

for an Autobiography, *The Saturday Review of Literature,* Vol. 32, No. 48, November 26, 1949, p. 36 cf. also *Albert Einstein—'Philosopher-Scientist,* Library of Living Philosophers, Vol. 7, ed. by Paul SCHILPP, Tudor Publ., Co., Ltd., New York, 1951, p. 49.

So, in general, it appears to be the usual practice to define a Unit Speech-Sound by such criteria as chest pulse, peaks of sonority and length (Cf. K. L. PIKE, *ibid.*).

The situation here is precisely analogous to the attempt at describing an electron by its physical properties and saying that it is a particle with such a charge and such a rest mass and that it is a little spinning magnet and so on (all this description being only partial!), while "the complete answer that is now available to the question 'what is an electron' is the uninspiring answer that it is what is described by the Dirac relativistic Quantum Mechanical Wave Equation" (Cf. C. J. ELIEZER, Some trends in Mathematical Research, *University of Ceylon Review,* Vol. 9, No. 2, 1951, p. 105. Cf. For the wave equation for an electron in a molar electromagnetic field of (unretarded) potential $k\mu$ EDDINGTON, *Fundamental Theory,* p. 234; also see *ibid.,* pp. 146 and 223 for DIRAC's linear wave equation, Cambridge, at the University Press, 1946; cf. also Arthur F. BENTLEY, Kennetic Inquiry, *Science,* Dec. 29, 1950, Vol. 112, No. 2922, p. 779).

Similar is my uninspiring answer to the question 'what is meant by "phoneme"' (Cf. page 1 and footnote 3 of my Phonemics of Old Tamil).

Practical considerations have always been weighing with pragmatic phoneticians. PIKE tries to avoid the hitch in defining Vowel and Consonant by the invention of other sets of purely empirical concepts like vocoids and non-vocoids (cf. *ibid.,* p. 13 and p. 60). In the words of the specialist-consultant of the Modern Language Association of America referred to above, "no avoidable iconoclasm" seems to have been the prevalent rule (!). Again this situation is parallel to the time-honoured assumption of light "as the means for the statement of absolute simultaneity (because of the high value of *c* for the practical experience of everyday life" before the advent of Relativity (Cf. A. EINSTEIN, *ibid.,* p. 55).

I may further point out here in reply to the specialist-consultant of the Modern Language Association of America (!), that my entire work as addressed to the problem of speech-structure is more to attempt to outline a programme than a theory (Cf. *Phonemics of Old Tamil*). Max BORN's words as referred to EINSTEIN's *The Meaning of Relativity,* are more truely applicable here. (*Nature,* Vol. 166, No. 4227, November 4, 1950, p. 751). [Cf. also Max BORN, *Natural Philosophy of Cause and Chance,* Oxford, 1949, p. 86, pp. 141-2, p. 90.]

Here I wish also to add a few more words in order to bring into greater relief the subtler concept of the alpha phoneme theory. The phoneme-hypothesis has been taken by scholars so far, as only a very useful working hypothesis. (Cf. André MARTINET's review of Kenneth L. PIKE's *Phonemics, Word,* Vol. 5 No. 3, December 1949, p. 285). [Cf. also the following, "On the whole, what can 'existence' mean in the case of a phoneme (Cf. my *Phonemics of Old Tamil,* p. 39, footnote 103). We might imagine that the phoneme has a physical existence in the sense that every single actualization of it contains, among variables, the same material element....even with 'segmental' phonemes, contrast and not substantial identity is relevant", André MARTINET, *ibid.,* p. 283.]

Further, by the harmonization attempted to be established between Phonetics and Phonemics through the concept of Alpha phoneme, we go deeper than the earlier workers in the field [Cf. John LOTZ's review of A. MARTINET's Phonology and Functional Phonetics, *Word,* Vol. 6, No. 1, April 1950, p. 88; Cf. also Kenneth L. PIKE, *Phonemics,* University of Michigan Publications, Linguistics, Vol. III, Ann Arbor — University of Michigan Press, 1947, pp. 57 ff].

the field of Physical Phonetics, the logical foundations of the Alpha-phoneme theory being far removed from phenomenology.[22]

The conception of a dimensionless parameter represents definitely an abstract *negative* thinking; but the alpha-phonoid concept, positive in a purely physical sense, is a climb-down to the less abstract and a communicable medium for interpreting our ultimate subjective experience.[22a].

We may now proceed to re-evaluate the alpha-phoneme theory in the following light. We start with the following well-known relations:

$$E = h\nu \qquad (1)$$

where, $E =$ the energy of emission of the electron, $h =$ Planck's constant, and $\nu =$ frequency[23] and $h\nu$ is the work done in dragging the electron from the atom[24] and also

$$P = hk \qquad (2)$$

where, P = a mechanical momentum and k = number of waves per unit length and h is as before Planck's constant.

The first relationship is the well-known PLANCK's fundamental law of quantum mechanics, while the second relationship is due to DE BROGLIE and EINSTEIN.

Now,

$$\Delta t \,.\, \Delta\nu \sim 1 \qquad (3)$$ [25]

22. For the question of the logical foundations of physics being removed from phenomenology, see EINSTEIN, *Out of my later Years*, Thames and Hudson, London, 1950, pp. 63ff., especially pp. 73-4.

22a. The alpha-phonoid concept in the present form is a non-linear function with time which is conceived to be of a non-Archimedean order or a 'Veronesean continnum' (cf. Addendum I, cf. also in this connection F. SMITHIES, Levels of Abstractness in Mathematics. *Nature*, Vol. 169, No. 4290. January 1952, p. 86.)

23. Edmund WHITTAKER, *From Euclid to Eddington*, The Tarner Lectures, 1947, Cambridge University Press, 1949, pp. 136-37.

24. Cf. also Max BORN, *Natural Philosophy of Cause and Chance*, The Waynflete Lectures 1948, Oxford at the Clarendon Press, 1949, p. 90.

Max BORN, Fifty Years of Physics, *Science News* 19, Penguin Books, Febr., 1951, pp. 54 and 56; C. T. K. CHARI, Some Metaphysical Questions about the Doctrine of the 'Specious Present' *The Philosophical Quarterly*, Vol. 23, Nos. 3 and 4, p. 133, footnote 18. Arthur MARCH, *Natur und Erkenntnis, Die Welt in Der Konstruktion Des Heutigen Physikers*, Wien Springer-Verlag, 1948, pp. 48 ff.

25. This has been worked out by GABOR; (cf. Nature, 159, 1947, p. 591 and also 166, 1950, pp. 725); and Norbert WIENER, *Cybernetics*, John Wiley and Sons, Inc., New York, Hermann et Cie, Paris, 1948.

Cf. also my *Phonemics of Old Tamil*, p. 30, footnote 79.

Also,

$$\triangle l \,.\triangle k \sim 1 \qquad (4),$$

where, t is time (duration of a tone of frequency ν) and l is length of the train of waves respectively.

Therefore it follows,

$$\triangle t \sim 1/\triangle \nu \qquad (5)$$

and $\triangle l \sim 1/\triangle k \qquad (6)$

Now, therefore, from (1) and (2),

$$\triangle t \,.\triangle E \sim h \qquad (7)$$

and similarly,

$$\triangle l \,.\triangle P \sim h \qquad (8)$$

(7) and (8) are really HEISENBERG's uncertainty relations, i.e., if we sharply define $\triangle E$ and $\triangle P$, $\triangle t$ and $\triangle l$ are large; a tiny particle of sharp energy and momentum are associated with long intervals of time and space.

Through the application of the laws of non-commutative matrix algebra the above relations are put in the following generalised form by Max BORN.[26]

If f is a matrix function of two other matrices p and q, then,

$$fq - qf = (h/2\pi i)\ (\partial f/\partial p)$$

and

$$pf - fp = (h/2\pi i)\ (\partial f/\partial q),$$

26. Cf. Max BORN, *Physics and Metaphysics, Science News*, 17, 1950, pp. 15-17, Penguin Books; cf. also Martin JOHNSON, *Science and the meanings of Truth*, Faber and Faber Ltd., London, p. 66.

Cf. W. WILSON, The Concept of Energy, (Chapter I, *A Century of Science* 1851-1951, ed., by Herbert DINGLE, p. 22,. 1951, HUTCHINSON's Scientific and Technical Publications, London, New York, Melbourne, Sydney, Cape Town), Cf. too H. DINGLE, The Significance of Science (Chapter XX, *ibid*. p. 315).

provided that p and q satisfy the relation,

$$pq - qp = (h/2\pi i)\,1.$$[27]

Now, therefore, when we define the energy and the momentum of a particle sharply, we find precision wanting in the definition of its position in time and space respectively.

Thus Heisenberg's principle states that the precision in determining simultaneously two 'conjugate magnitudes' viz., valocity and position of an electron is limited by Planck's constant h.[28]

"In the older (uncritical) view, which interpreted electrons as 'material points', pre-established thing-like entities, this principle seemed to involve sceptical resignation, the acknowledgment that the finite human mind cannot trespass certain boundaries. Critical analysis however, reveals that the traditional formulation of these 'insoluble problems' is inadequate, and that the pertinent arguments of the sceptics lose their point as soon as we formulate the problems adequately. We have to dispose of the idea that a material point is a pre-established entity, existing independently of the relation into which it may enter, and to realise that 'material point' is defined in terms of the system of these relations. CASSIRER points out that there is no basic difference in this respect between the notion of a 'material' physical point and the notion of an 'ideal' mathematical point. In the so-called axioms of geometry, a mathematical point is 'implicity defined' in terms of a system of formal relations. 'Material point' on the other hand is implicity defined in terms of a system of relations which we call a physical theory. Hence 'material' points are intellectual constructs, as are 'ideal'

27. A. E. RUARK and H. C. UREY, *Atoms, Molecules and Quanta*, McGraw-Hill Book Company, Inc., New York and London, 1930, p. 583; Max BORN, *Natural Philosophy of Cause and Chance*, pp. 89-90, 191, 18-19, 188, 189-190, 91; Edmund WHITTAKER, *From Euclid to Eddington*, A Study of Conceptions of the External World, p. 164; also E. T. WHITTAKER, *A Treatise on the Analytical Dynamics of Particles and Rigid Bodies*, 4th Edition, New York, Dover Publications, 1944, p. 264; R. A. FRAZER, W. J. DUNCAN, A. R. COLLAR, *Elementary Matrices and Some Applications to Dynamics and Differential Equations*, Cambridge at the University Press; New York, the Macmillan Co., 1946, pp. 274-6.

Cf. also, Werner HEISENBERG, *The Physical Principles of the Quantum Theory*, English Translation by Carl ECKART and Frank C. HOYT, Dover Publications, Inc., 1930, pp. 118-119, Appendix, The Mathematical Apparatus of the Quantum Theory.

28. E. T. WHITTAKER, *From Euclid to Eddington*, pp. 143-148; Cf. also Lecomte Du NOÜY, *Biological Time*, 1936, pp. 28-29; W. HEISENBERG, *Zeits f. Physik*, 43, 172-198 (1927); CONDON and MORSE, *Quantum Mechanics*, p. 25; G. STEWART, JASA, 2, 1930, p. 325. G. TEMPLE, *The General Principles of Quantum Theory*. Methuen's Monographs on Physical subjects 4th ed., 1948, pp. 40-43.

H. A. WILSON, *Modern Physics*, 3rd Edition, Blackie and Son, Ltd., London and Glasgow, The Student's Physics, Vol. VI, 1948, p. 99.

Cf. also Werner HEISENBERG, *The Principles of the Quantum Theory*, translated into English by Carl ECKART and Frank C. HOYT, Dover Publication, Inc., 1930, p. 15. J. W. DUNNE, *The Serial Universe*, Faber & Faber Ltd., 24, Russell Square London, pp. 175-176 and 186-187.

geometrical points, and the demand that 'absolute' locations should be assigned to them is as illegitimate as would be the corresponding demand for geometrical points ".[29]

In our consonant-vowel configuration, therefore, the 'point-events' (acoustico-articulatory events)[30] are implicitly defined by the very system of relations into which they enter. One is reminded here while speaking of the continuum of acoustico-articulatory events, of EINSTEIN's substitution of the concept of 'events' for 'particles'. Each event is related to another by an 'interval'. This interval can be analysed in various ways as into a time-element and space-element.

None of these ways is theoretically preferable to any other and the choice between these various ways is purely arbitrary. No physical facts correspond to these different ways or conventions.[31]

In our consonant-vowel configuration again, between the two sets of the events, making what we, broadly speaking, designate as the consonant and the vowel, there is a Dedekind 'cut' which is a pure mind-construct. Or rather, more exactly, it is a formulation of an 'indefinable Infinite'.[32]

29. Felix KAUFMANN, Cassirer's Theory of Scientific Knowledge, *The Philosophy of Ernst Cassirer*, The Library of Living Philosophers, Vol. 6, 1949, p. 198.

Cf. also the following: "BORN suggested the idea that the waves do not constitute anything material at all but represent probabilities. His interpretation gave the problem of the atom an unexpected turn: the elementary entities were assumed to be particles, whose behaviour was controlled not by causal laws, but by probability laws of a form resembling waves as far as their mathematical structure was concerned. In this interpretation the waves do not have the reality of material objects, but only that of mathematical quantities" [Hans REICHENBACH, *The Rise of Scientific Philosophy*, 11, Are there Atoms?, pp. 174-5, University of California Press, Berkeley and Los Angeles, 1951].

30. See footnote 1 of my *Phonemics of Old Tamil.*

31. Cf. Bertrand RUSSELL, *History of Western Philosophy*, London, George Allen Unwinn Ltd., 1946, pp. 860-61.

32. See Addendum I. In this connection, I wish to quote the following from a letter of Prof. William F. HEIJN of the Institute of General Semantics, Lake Ville, Connecticut, U.S.A. to my friend Mr. Soli K. PARUKH, of 29th Nov., 1951.

"To me the fundamental emphasis in General Semantics is exhibited in KORZYBSKI'S statement of the 'natural order of evaluation', i.e., non-verbal first, verbal next. Curiously enough, one of the main aspects of General Semantics which first attracted my attention and interest was KORZYBSKI's emphasis on 'silence on the objective level', for it was the similarity of this notion to the notion of 'internal silence', meditation, or what not, which is basic in Yoga, in which I had been interested for years, which made me believe that KORZYBSKI was somehow dealing with basic problems. At any rate, in this 'natural order' it seems to me it is implied that the verbal side of General Semantics is the lesser one".

Finally, I quote also Max BORN here "In cases like this, the idea of scientific objective reality is obviously inadequate, almost absurd", to make my meaning clear. Max BORN, *Natural Philosophy of Cause and Chance*, Oxford at the Clarendon Press, 1949, p. 126.

Addendum I

Ernst PULGRAM (one of the writers on the subject of phonemics I have just come across) says that "Phonemes are distinctive classes of speech sounds" (*Word*, Vol. 7, No. 1, April 1951, p. 15) and "all phones identifiable as members of a phoneme are its allophones" (*ibid.*). It can be easily seen that it will be more correct to say that a class of similar classes (allophones) is a phoneme (cf. p. 21, *Deccan College Monograph Series, No.* 7, Poona, 1951) and hence a phoneme enjoys the status of number. For, "mathematically, a number is nothing but a class of similar classes: this definition allows the deduction of all the usual properties of numbers, whether finite or infinite and is the only one (so far as I know) which is possible in terms of the fundamental concepts of general logic" (Bertrand RUSSELL. *The Principles of Mathematics*, London, George Allen & Unwinn Ltd., Museum Street, Second Ed., 1937, reprinted 1950, p. 116).

My theory of speech-structure directly takes us into the re-examination of all our intuitions about time (cf. pp. 28 and 35 *Deccan College Monograph Series, No.* 7). Temporal continuity can *not* be assimilated to the CANTOR-DEDEKIND type of continuity. In this connection, Prof. C. T. K. CHARI is suggesting a possibility of a non-Archimedean time-order based on a principle less restricted than Dedekind's postulate and more generally of a non-metrizable topologically conceived time [cf. also Edmund WHITTAKER's reference to Giuseppe VERONESE's work in *From Euclid to Eddington — The Tarner Lectures*, Camb. Univ. Press, 1943, pp. 28 and 41; Felix KLEIN: *Elementary Mathematics from an advanced Stand-point*, English translation by E. R. HEDRICK and C. A. NOBLE, New York, Dover Publications, 1924, pp. 33, 218 and pp. 262-68. C. T. K. CHARI: Is Time Metrizable, *Proc. Ind. Philos. Congress*, 1951, pp. 134 ff. (see especially pp. 138 ff.). On p. 140, footnote 40, Prof. C. T. K. CHARI generously acknowledges my citing his, "tentatively expressed doubts about the familiar assumptions of a metrizable time." He also draws attention to references "to the 'specious present' and the 'continuum' in (my) monograph".

Giuseppe VERONESE's work referred to by WHITTAKER is *Fondamenti de Geometria*, Padua 1891, German translation by A. SCHEPP, *Grundzüge der Geometrie*, Leipzig, 1894. Cf. A. N. WHITEHEAD's *Essays in Science and Philosophy* 1948, p. 194.]

With regard to the *arrangement* of instantaneous entities — the 'point-singularities' (Cf. art 15, p. 32 of *Deccan College Monograph Series, No.* 7) — which are superposed aggregates of observation on *time* (i.e., congruent with

time), one is reminded here of DIRICHLET's theorem that the sum of a series of positive terms is the same in whatever order the terms are taken. (G. H. HARDY: *A Course of Pure Mathematics*, 8th ed., Cambridge, at the Univ. Press, 1941, Ch. 8, art. 176, p. 347).

The *set* of our instantaneous entities have a Cantorian Continuity against an apparent background of *time* (which obviously cannot be assimilated to the CANTOR-DEDEKIND type of continuity. See art, 17, p. 39 of *Deccan College Monograph Series, No. 7*).

In this context, I refer also to Prof. C. T. CHARI's papers "J. W. Dunne and the Misconception about Relativistic Time" in the *Philosophical Quarterly*, Vol. 23, pp. 1-11 and "some Metaphysical Questions about the Doctrine of the 'Specious Present'" in the *Philosophical Quarterly*, Vol. 23, Nos. 3 and 4, pp. 129-138. In the last paper on page 133 footnote 18, he refers to 'time-atom' or 'chronon' which is of the order of $4 \cdot 5 \times 10^{-24}$ seconds, which is the 'minimum' period of time corresponding to the highest known frequency of radiation (e.g., that of cosmic rays). Concluding their discussion on the significance of time in physics, R. B. LINDSAY and H. MARGENAU in their *Foundations of Physics* (New York, John Wiley and Sons, Inc., fourth printing, 1946, p. 78), say, "It is of interest to observe, in any case, that if there exists a time quantum, all spectra must be line spectra and 'continuous' spectra are only those in which the lines are too close together to be resolved by ordinary optical instruments. The future alone can decide the fate of the assumption of discrete conceptual time. It may be in order, however, to remark briefly the profound alteration the introduction of discrete time would necessitate in all physical theories. Continuous conceptual time provides, so to speak, a continuous background against which to describe both discrete and continuous phenomena. If time itself is assumed discrete, this background is lost and the whole question of the use of time in physical description must be examined anew." Pages 37-39 in *Deccan College Monograph Series, No. 7*, are further comments on this question and the sentence, "we are thus deviously led once again to the threshold of the philosophical enquiry concerning the ultimate 'discontinuity' or 'continuity' in Nature" (p. 39) opens up 'vistas' as Prof. C. T. K. CHARI has remarked in his letter to me of 13th August 1951. [Cf. also in this connection H. A. C. DOBBS. The Relation between the Time of Psychology and the Time of Physics, (with a logistic analysis of the Two-fold Time-theory of the Specious Present, by Professor, C. D. BROAD). *The British Journal for the Philosophy of Science*, Vol. II, No. 6, August 1951, pp. 122-141; Ananda K. COOMARASWAMY, *Time and Eternity*, Messrs. Artibus Asiae Ascona (Switzerland), reviewed by S. S. in the *Quarterly Journal of the Mythic Society*, New Series, Vol. 40, Nos. 1 and 2, pp. 33-38, July-October, 1949; J. G. BENNETT, *The Crisis in Human Affairs*,

London, 1949, pp. 145-166; Saint AUGUSTINE, *Confessions*, translated with a preface by E. B. PUSEY, Everyman's Library—200, pp. xxii-xxiv and especially pp. 257-277. See also, for the unreality of space, pp. 255-6; J. W. FINDLAY, *Time: A Treatment of Some Puzzles*, Chapter III, *Essays on Logic and Language*, ed., by Anthony FLEW, pp. 37-54, especially pp. 44, 46-7, and 50, Oxford, 1951].

At the end of p. 34 of *Deccan College Monograph Series No. 7*, I have stated that "the structure within that interval in a certain standard situation [obviously where the amplitude of the oscillation is reduced to an insignificant amount, cf. p. 118 of *Proc. Interna. Congr. of Phonetic Sciences II*. See also p. 32, footnote 87 of my Monograph i.e., *Deccan College Monograph Series, No. 7*], which is called the *Āytam-phenomenon* may be defined as a characteristic value differential equation. I envisage here quite clearly a function non-linear with respect to time observations alone, perhaps leading in its wake to the creation of a newer mathematics [Cf. my paper: The Problem of the Structure of the Vowels and the Consonants in Human Speech, *BDCRI*, Vol. 9, pp. 190-1. Also, Martin JOHNSON's discussion on de SITTER's conception of even the curvature of temporal dimensions, *Time, Knowledge and the Nebulae*, Faber and Faber Ltd., London, 1946, pp. 77 ff., and my Monograph, p. 25].

I must make it clear here that superfically (i.e., taking only the surface view) the *Āytam* concept due to the ancient Tamil grammarian is *not* the same as the *alpha phonoid* (which is the generalised *Āytam phenomenon* in speech). [Cf. my paper: The Theory of the Alpha Phonoid, *BDCRI*, Vol. 10, pt. 1, footnote 7. I wish to quote in this connection the following words of Hermann WEYL—"In a sweeping way and in conformity with the experience in all branches of physics, the law of entropy accounts for 'time's arrow' for the different roles of past and future, the irreversibility of natural processes. Yet there is a serious difficulty. For the derivation of the law of entropy from the statistics of molecular motion is based exclusively on elementary laws, such as the laws of impact for molecules, which are reversible, i.e., which are invariant under a change from t to $-t$. This reversibility is displayed very impressively by the heavenly motion, where disturbing influences are entirely, or almost entirely, eliminated. Their harmony seems to triumph over the law of Universal decay that prevails on earth. A close examination of the statistical derivation of the entropy law will show that indeed an improbable state, one that is far from thermodynamic equilibrium, will be followed with overwhelming probability, by a state closer to equilibrium. In fact this prediction is confirmed by all fluctuation phenomena: they disclose no irreversibility." Hermann WEYL, *Philosophy of Mathematics and Natural Science*, Princeton University Press, 1949, pp. 203-4.

This is WEYL's most profound and illuminating treatment of the whole question as E. T. WHITTAKER rightly remarks, *Nature*, Vol. 165, June 3, 1950, p. 866.

In the light of this, the significance of my apparently paradoxical remarks that, in so far as both the *Āytam* concept and the *Alpha Phonoid* concept suggest the 'formless', both are identical (i.e., the relation between the two concepts is one of reversibility), is quite obvious. (Cf. footnote 3, page 1 of my Monograph).

Also here one must remember that "constructive science can sustain the intuitionism of BROUWER; but the sensualism of HUME and HJELMSLEV—which on principle would recognise as real only the immediately given, without being able to carry this through—is deadly for science". Hermann WEYL, *ibid.*, p. 144. Surely the Alpha Phoneme theory is not concerned with figures drawn on a blackboard; it is a geometry serving as an ideal basis for the study of speech structure !]

The alpha phonoid is then to be defined in terms of partial differential equations and the vowels and the consonants in human speech are to be derived as boundary conditions. (See p. 27 of my Monograph). Thus, the programme envisages field equations as those of MAXWELL's ("MAXWELL's theory is nothing else than MAXWELL's equations", my paper The Problem of the Structure of the Vowels and the Consonants in Human Speech, *BDCRI*, Vol. 9, 1948, p. 188, section 4. Cf. also "It is only of recent times that we have come to accept that the ether is no more than a subject for the verb 'to undulate', and that Clerk MAXWELL's theory is simply Clerk MAXWELL's equations". E. N. da C. ANDRADE, A Century of Physics, *Nature*, 168, Oct. 13, 1951, No. 4276, p. 623).

My theoretical formulation of the problem of speech-structure is again quite in agreement with special relativity in so far as it asserts that *acoustical time* is different from the *articulatory time*, though measured from a common origin (the alpha phonoid !) [Cf. C. T. K. CHARI, J. W. Dunne and the Misconception about Relativistic Time, *The Philosophical Quarterly*, Vol. 23, No. 1, p. 6. Also Erwin SCHRÖDINGER, Space-Time Structure, Cambridge, at the University Press, 1950, p. 76. Cf. my Monograph, p. 37 and footnote 100.]

From the principle of equivalence, no doubt EINSTEIN points out that "there is no longer any reason for favouring, as a fundamental principle, the 'inertial systems'; and, we must admit as equivalent in their own right, also *non-linear* transformations of the co-ordinates (x_1, x_2, x_3, x_4). If we make

such a transformation of a system of co-ordinates of the special theory of relativity, then the metric

$$ds^2 = dx_1{}^2 + dx_2{}^2 + dx_3{}^2 - dx_4{}^2,$$

goes over to a general (Riemannian) metric of Bane

$$ds^2 = g_{\mu\nu} \; dx_{\mu} \; dx_{\nu}$$

(summed over μ and ν)

where the $g_{\mu\nu}$, symmetrical in μ and ν are certain functions of $x_1 \ldots\ldots x_4$ which describe both the metric property, and the gravitational field in relation to the new system of co-ordinates."

[A. EINSTEIN, *Out of my Later Years,* Thames and Hudson, London, 1950, 12. Physics and Reality, art. 4, The Theory of Relativity, pp. 80-81].

But I go a little beyond in envisaging the possibility of discovering functions non-linear with time alone, which is of a non-Archimedean order or a 'Veronesean Continuum' (cf. C. T. K. CHARI, *Proc. Ind. Philos. Congr.* 1951, pp. 138-39). Thus a physical significance can also be attached to the non-Archimedean idea (WHITTAKER: *From Euclid to Eddington,* Cambr. Univ. Press, 1949, p. 28). Such an approach is also more in line with E. A. MILNE'S Kinematic Relativity (Cf. my paper, The Problem of the Structure of the Vowels and the Consonants in Human Speech, *BDCRI,* Vol. 9, p. 190, Cf. also my Monograph p. 25).

The rank and file of workers in the field of physical phonetics have so far occupied themselves either with verifying the time-honoured theories of D. C. MILLER and Sir Richard PAGET in the laboratory or with elaborating new details. [For instance, see STEINBERG in the *Journal of the Acoustical Society of America,* 6, 1934, pp. 16-24. Cf. also my paper, The Problem of the Structure of the Vowels and the Consonants in Human Speech, *BDCRI,* 9, p. 185].

George D. BIRKHOFF (The Mathematical Nature of Physical Theories, Society of the Sigma XI National Lectureships 1943-44. *Science in Progress,* 4th Series, p. 149, New Haven, Yale University Press, 1946), observes that "topology deserves to obtain a more prominent position in physical theories than it has yet obtained. Topology may be defined as rudimentary form of geometry which is not concerned with shapes or size, but rather with the connections of geometric entities of various dimensions.

"Thus in the mathematical patterns to be utilised in physics in the future, it may be conjectured that group theory, together with the allied principle of sufficient reason, variational principles, such as the principle of

least action, and topology, will play an important part." [In connection with my envisaging a new type of function non-linear with time, cf. also the two concluding paragraphs thereon in this article, given at the end here. Cf. also p. 125, *ibid.;* this is also my answer to the question raised by VACHEK in *Mélanges van Ginneken,* Can the Phoneme be defined in terms of Time ?; see p. 119, footnote 49, of my paper The Utterance Continuum and the Alpha Phoneme, *BDCRI,* vol. 6; cf. also my paper on the Sub-class of Alpha Phoneme, end of last but one para and footnote 13, *BDCRI,* vol. 4, p. 56].

My physical (alpha phonoid) theory rests upon topology (cf. my Monograph, pp. 33 and 39). But my geometrical (alpha phoneme) theory corresponds to the point-singularity conception of E. A. MILNE, before which there is neither time, nor space nor becoming. [E. A. MILNE: *Nature,* 163, No. 4153, June 4, 1949, p. 856, and my Monograph, p. 9, footnote 13a] (Cf. also The Utterance Continuum and the Alpha Phoneme, *BDCRI,* vol. 6, p. 79, footnote 1. Also The Problem of the Structure of the Vowels and the Consonants in Human Speech, *BDCRI,* vol. 9, p. 191, footnote 3).

I think I have made my meaning sufficiently clear in the above paragraphs. For the sake of completeness, I give also below the last two paras of George D. BIRKHOFF in the article referred to above:

"Physical theories have been, and always will be, mathematical theories; and the history of physics show(s) inversely that those mathematical theories which have not originated in a physical model but have been directly created by the human mind, are likely to be exemplified later in physical applications."

"It will probably be the new mathematical discoveries which are suggested through physics that will always be most important, for, from the beginning, nature has led the way and established the pattern which mathematics, the language of nature, must follow."

I may only add here further that my alpha phoneme concept has an 'indeterminable' (or *indeterminate*) value in a trichotomous logic [Cf. H. REICHENBACH, *Philosophic Foundations of Quantum Mechanics,* University of California Press, 1946. Also REICHENBACH, *The Rise of Scientific Philosophy,* p. 227, Univ., of Calif., Press, 1951. Cf. too, C. T. K. CHARI, The Unwalled City of Spirit, *The Vedanta Kesari,* 38, No. 7, 1951, p. 258 (Cf. my Monograph, p. 25, end of art 11).], which disregards *tertium non datur.* [For *contra* see Max BORN, *Natural Philosophy of Cause and Chance,* Oxford, at the Clarendon Press, 1949, p. 107. Cf. also, ACKERMANN, Widerspruchsfreier Aufbau der Logik I. Typenfreies System ohne Tertium non Datur, *Journ. Symbolic Logic,* 15, 1950, pp. 33-57].

In connection with my conception of the alpha phoneme, I am also tempted to refer to the following words of Sri. AUROBINDO:

"But again we find that we are being misled by words, deceived by the trenchant oppositions of our limited mentality with its fond reliance on verbal distinctions as if they perfectly represented ultimate truths and its rendering of our supramental experiences in the sense of those intolerant distinctions. Non-Being is only a word. When we examine the fact it represents, we can no longer be sure that absolute non-existence has any better chance than the infinite Self of being more than an ideative formation of the mind. We really mean by this Nothing, something beyond the last term to which we can reduce our purest conception and our most abstract or subtle experience of actual being as we know or conceive it while in this Universe. This Nothing then is merely a something beyond positive conception. We erect a fiction of nothingness in order to overpass, by the method of total exclusion, all that we can know and consciously are. Actually, when we examine closely the Nihil of certain philosophies, we begin to perceive that it is a zero which is All or an indefinable Infinite which appears to the mind blank, because mind grasps only finite constructions, but is in fact the only true Existence." [Sri AUROBINDO, *The Life Divine*, Calcutta, 2nd ed., 1945, Vol. I, pp. 34-5].

[From Prof. William F. HEIJN's letter to me dated 25th January 1952, I gather that there is some likelihood of my earlier letter to him, dated 5th January 1952, being published in the *General Semantics Bulletin* (Institute of General Semantics, Lakeville, Connecticut, U.S.A.). In the event of such a publication as a kind of a summary of my Monograph (*Deccan College Monograph Series, No.* 7, Poona 1951), I would like the interested readers of the present paper to consult that also, although in substance that will not be much different from the addendum I published here.]

Addendum II

In conclusion, I have to say that the intended meaning of my alpha-phoneme theory and the real import of my *Monograph* has been missed by Prof. P. S. Subrahmanya SASTRI in *The Hindu* of April 20, 1952 (p. 10), while reviewing my *Phonemics of Old Tamil.* (See also in this same connection, the review of my Monograph by Leigh LISKER in the *Journ. of American Oriental Society,* vol. 72, No. 4, (1952), p. 194, which too has missed my main point).

He has said, referring to my work: "the attempt of the author is laudable and it will bear rich fruit if he takes the trouble of touring all the places where the different dialects of the Dravidian languages are spoken, records the different sounds spoken there with his instruments and takes photographs of the different positions of the vocal organs when different

sounds are pronounced, classifies them, views them in the light of the opinion of modern Phoneticians and publishes his views on the same."

Although individual observations formulated by this learned reviewer are within the long range programme of myself and my collaborators, it must be stressed that my work has been an attempt at the discovery of basic theoretical laws governed by two principles (even as it was to EINSTEIN), viz., " an empirical one, that the conclusion drawn from the theory must be confirmed by experience, and a half-logical, half-aesthetic principle, that the fundamental laws should be as few in number as possible and logically compatible " — a conception hardly differing " from that of *logical positivism*, according to which the general laws are statements from which our observations can be logically derived ", as Philipp FRANK has beautifully observed (Cf. Philipp FRANK, *Einstein, His Life and Times*, London, 1948, pp. 261-2).

ERRATA to '*Phonemics of Old Tamil*' (*Deccan College Monograph Series, No. 7,* Poona 1951).

1. Transliteration, p. 8, ḻ is the Tamil 16th consonant departing from the usual practice of other scholars.

2. P. 9, line 15, *initially* should be read as *medially*.
3. P. 23, line 5, *voiced* should be read as *voiceless*.
4. P. 42, line 12, ḻ in both the places should be read as ḷ̤.
5. P. 49, lines 12 to 14, should read as follows:

[In verse], after a long phoneme a short phoneme of the *same pattern* is added to 'a speech-form which is deficient in length' (*Kuṉṟicai moḻ̤i*) [from the point of view of metrical requirements].

6. (i) p. 24, *Ka°°ṟītu* and *Kaṟṟītu* should be read as *Ka°°ṟītŭ* and *Kaṟṟītŭ* respectively. *Pattu* and *Pa°°tu* should be read as *Pattŭ* and *Pa°°tŭ* respectively.

(ii) P. 55, lines 18 and 19.
Palā ak kōṭu < *Palā* + *kōṭu* should be read as
Palā ak kōṭŭ < *Palā* + *kōṭŭ*.

7. P. 35, line 21, *happens* should be read as *happen*.

8. P. 29, footnote 77, first line, read *connoting* for *denoting*.

EPISTEMOLOGY AND THE ALPHA-PHONOID THEORY

by

C. R. SANKARAN

[Abstract: —

The Theory of the Alpha-Phonoid[1] is brought into further relief with its epistemological implications.]

The Helmholtzian conception in regard to the question of Speech-structure was elaborated by the physical scientists who followed him.[2] MILLER's view usually known as the "Characteristic Resonance Region Theory" as applied to vowels held sway until recently. The arbitrary assumption that the components of vowels are all harmonic ones was at the basis of this type of investigation.[3] Behind such a view was the implicit assumption that the consonant and the vowel are *absolutely distinct.* The whole explanation of vowel quality in terms of characteristic frequencies was subsequently challenged by E. W. SCRIPTURE.[4] On his view the vowel character depends on the general shape of the "vibration profile", and any frequencies of any kind may be present provided they give the same general form of profile. In challenging the older view regarding the characteristics of vowels, A. GEMELLI also agreed with Scripture. A. GEMELLI and G. PASTORI with the aid of VERCELLI adapted a mathematical method, which is said to have amply proved its effectiveness in other fields of research, to the analysis of speech sounds.[5] It is certainly a matter of fundamental importance to be able to define precisely the positive qualities which characterise the vowels and the consonants in human speech. On this postulate and on the other postulate that the vowel and the consonant are only mutually exclu-

1. Vide my paper The Theory of the Alpha-Phonoid, submitted to the Allahabad Sessions of the Indian Science Congress, in January 1949, *Bulletin Deccan College Research Institute* (BDCRI) Vol. X, pp. 60-67, 1950.

2. Cf. C. R. SANKARAN, The Problem of the Structure of the Vowels and the Consonants in Human Speech, BDCRI, Vol. IX, 1948, pp. 184-193.

3. Manuel J. ANDRADE, Some questions of fact and Policy concerning Phonemes, *Language,* Vol. 13, 1936, p. 4.

4. *Nature,* 130, pp. 275 and 965 (1932).

5. A. GEMELLI and G. PASTORI, L'Analisi Elettroacustica del Linguaggio, (Milan 1934), pp. 68-91.

sive on phonetic grounds,[6] starting with the profile theory of Scripture, any consonant-vowel configuration is defined to be a *set* of infinite series of sound-profiles which is *densely ordered,* the ordering (transitive) relation being in *time.* The important thing to be borne in mind here is that there is *no* interval in time *between* the consonant and the vowel, as we have started with the assumption that theoretically the acoustico-articulatory interval between these two fundamental elements of speech (viz., the consonant and the vowel) is absolute zero in point of time in the configuration under discussion.

In the manner of VEBLEN replacing the notion of "betweenness" in PEANO's system by a three point relation of order, and since the whole consonant-vowel configuration under consideration is conceived to be partitioned into consonant sound-profiles, non-consonant sound-profiles, non-vowel sound-profiles and the vowel-profiles, it would be more precise to say that we are concerned here with a "four-point" relation of order,[7] as in projective geometry. There are two sections each made up of two Dedekind segments, (viz., the lower and the upper sections), and the interval between the two-section-points is defined as the 'Alpha-phoneme'. This is purely a conceptual limit, known as the Weierstrass-limit.

Now this construction is an auxiliary idea for the purpose of visualization. It is merely a mathematical symbol. No physical meaning can be ascribed to this. No *real fact* of nature (concerning of course the universe of human speech) is expressed thereby, although this method of conceiving *fits* the situation and is very neat. The *whole* (i.e. the *sum total*) of certain events (viz., infinitely small profiles) in the consonant-vowel configuration is conceived to form a continuum, and these events are correlated with the real numbers. When I speak of *events,* I start, at any rate in the beginning, with the concept of change in position of entities of more than molecular magnitude so as to avoid the discussions of the identical nature of such

6. C. R. SANKARAN, On Defining the Alpha-Phoneme, *Current Science,* Vol. 13, 1944, pp. 11-12.

Cf. "Stumpf has found an analogy for the difference between the consonants and the vowels in the difference between the chromatic and the achromatic visual sensations. The comparison is not wholly satisfactory but it assists us to understand the gradual transition that we have described from the unvoiced consonants to the pure vowels. Starting in the visual series from a neutral grey we may introduce more and more of any colour until the colour is, as we say, saturated. There is a comparable transition from the 'colourless' consonants to the 'colourful' vowel-sounds". George SETH and Douglas GUTHRIE, *Speech in Childhood—its development and disorders.* Oxford University Press, London, Humphrey Milford, 1935, p. 63.

7. Cf. Gilbert De B. ROBINSON, *The Foundations of Geometry.* Mathematical Expositions No. 1, The University of Toronto Press, Toronto, Canada, 1940, pp. 51-52.

abstractions as atoms and quanta.[8] Each *event* (of our configuration) is an infinitesimal region in a space-construct—a 'continuous manifold' in which positional relationships have to be expressed. The concept of 'positional relationship' involves two things:

(1) The basic concessive assumption of science that no two events are exactly alike.[9]

(2) *Analytical Dynamics.*[10]

Now we arrive at the basic idea of *congruence,* as we are really dealing with the problem of the superposition of arithmetical aggregates of observation (viz.,sound-profiles in our consonant-vowel configuration with which we have started) on *time.* We go beyond visual experience, while we are at the idea of *congruence ;* considering *motion* as a more elementary idea than *congruence,* the former can be used to define the latter. The idea of *rigidity* (involved in the idea of the *motion* of material bodies referred to above) cannot be defined without reference to *congruence.* Taking *motion,* however, as a fundamental concept, *congruence* can be defined explicitly.[11]

In the earlier formulation of the Alpha-phoneme theory, I conceived the positions of the 'profiles' in terms of *distance* and *direction* as in *Eucli-*

8. Cf. W. F. Twaddell, On Defining the Phoneme. *Language Monographs,* No. 16, 1935, p. 37 (footnote).

9. See, *ibid.*

10. "A branch of knowledge in which the motions of material bodies, considered as due to the mutual interactions of the bodies, are discussed by the aid of mathematical analysis". E. T. Whittaker, *A treatise on the Analytical Dynamics of Particles and Rigid Bodies with an Introduction to the Problem of Three Bodies,* 4th Edition, New York, 1944, p. 1.

The 'set of events' which go to make up the consonant can be conceived as one material body in motion, while likewise the 'other set of events' constituting the vowel form another material body in motion.

The 'profile' theory of E. W. Scripture is extended here so as to mean that the components of the articulation which is a three-dimensional complex are having one-one relation with the components of the sound-waves. For, unlike the earlier approach to the problem, which regarded the sound-waves as uni-dimensional for purposes of, say, the Fourier Analysis, *implying* thereby that the components of the sound-waves are not readily comparable with the articulatory components, we proceed to regard the sound-waves as a multi-dimensional (space) continuum *congruent* with *time* and *strictly correlated* with articulation. For clarity, it is pointed out here that until the formulation of the Alpha-phonoid theory the assumptions that held sway were only:

(1) There is correlation between the articulation and the sound-waves, and that,

(2) This correlation is in a sense absolute, i.e., an observable difference in articulation is correlated with *some* observable difference in the sound-waves. W. F. Twaddell, therefore, chose articulatory rather than acoustic fractions as the basis for classifying the phonetic relations (Vide W. F. Twaddell, *ibid.,* p. 56).

11. Cf. Gilbert De B. Robinson, *Op. cit.,* pp. 7 and 55.

dean Space. I now suggest that we have to define position in terms of *relation* as in topological space.[12] In the Alpha-phonoid theory (a further refinement or rather physical extension of the earlier alpha-phoneme theory), therefore, the consonant-vowel configuration under discussion is an infinitely structured (*durchstruktuiert*) space, space being defined in the post-Riemannian sense.[13]

Now an interesting question arises. Every point in this space has a corresponding point in *time*, in which region this space is constructed. In regard to the conceptual 'cut' defined in the manner of DEDEKIND's postulate, in there or is there *not* a corresponding point in *time*? We cannot make an assumption here like DEDEKIND who in order to ensure continuity in the line, assumed an axiom of continuity for the line.[14] For, the Alpha-phonoid is a geometrical-physical theory whose purpose is to bring a multiplicity of sensory experiences into connection in the mind. The theory supplies a schematic arrangement to an abundance of experience,[15] which are *real*[16] (and not imaginary, for, all the rest of the 'events' in the consonant-vowel configuration under question are *real*). The problem, therefore, faces us that a conceptual 'cut' in the 'space' we have constructed corresponds to *no* point in *time*. This point is not caught in the network of time, and can be hence described as *timeless* or beyond time or in any manner we

12. Topology is a noble branch of mathematics and is the most general science of spatial relations. Cf. the following:

1. K. MENGER, *Dimensionstheorie*, Leipzig, Teubner, 1928.
2. F. HAUSDORFF, *Grundzüge der Mengenlehre, Leipzig*, veit, 1914.
3. W. SIERPINSKI, *Introduction to general topology*, Toronto, Univ. Toronto Press, 1934.
4. O. VEBLEN, *Analysis Situs* (2nd Ed.). New York, American Mathematical Society, 1931.
5. R. VAIDYANATHASWAMY, *A Treatise on set Topology*, Part I, 1947.
6. R. VAIDYANATHASWAMY, The New Mathematics, Presidential Address to the section of mathematics, *Proceedings of the 35th Indian Science Congress*, Patna, 1948.
7. Kurt LEWIN, *Topological Principles of Psychology*, English translation by F. HEIDER and M. HEIDER, 1936, New York, London.
8. J. BROWN, On the Use of Mathematics in Psychological Theory, *Psychometrika*, Vol. I, March 1936, pp. 77-90 and Vol. I, No. II, pp. 7-16.

13. RIEMANN, *Über die Hypothesen welche der Geometrie zu Grundeliegen*, Ed., by H. WEYL, Berlin, Julius Springer, 1923.

14. H. C. CARSLAW, *Introduction to the Theory of Fourier Series and Integrals*, 3rd Ed., pp. 24-5, 1921.

Leon CHWISTEK, *The Limits of Science*. Outline of Logic and of the Methodology of the Exact Sciences. London, Kegan Paul, Trench Trubner & Co., Ltd., 1948, pp. 74-75.

15. Cf. A. EINSTEIN, *Sidelights on Relativity, II. Geometry and Experience*, Translated by G. B. JEFFRY and W. PERRETT, London, 1932, pp. 45-6.

16. The 'events' (in a strictly physical sense) forming the continuum are conceivably translatable into 'real' sensory experiences.

choose. From out of this state of experiencing, the resolution into two broad 'partitions' (viz., the consonant and the vowel) as it were, takes place, the physical knowledge of speech universe being relative to consonant and vowel partitions, even as all physical knowledge is relative to space and time partitions.[17] Therefore, DEDEKIND's postulate as applied to speech-structure gains, as it were, a new significance in the methodology of mathematical thinking.[18]

17. EDDINGTON, *Space, Time and Gravitation.* Cambridge at the Univ. Press, 1931, p. 82.

18. I may remind the reader here of the concluding observations of C. D. BROAD in his work *Scientific Thought* (London, Kegan Paul, Trench Trubner & Co., Ltd., 1927, pp. 547-548).

The claim may be put forward here, that the Alpha-phonoid Theory with its epistemological implications, is just another attempt to show how the world of Physics and the world of sensible appearance are united into the one whole of nature.

The Alpha-Phoneme is the unobservable like the unobservable quantity in quantum mechanics viz., the wave-function of Schrödinger.

The Alpha-Phonoid is the observable like the square of the modulus of SCHRÖDINGER'S wave-function, Cf. Max BORN, *Natural Philosophy of Cause and Chance,* Oxford, at the Clarendon Press, 1949, p. 89; also Albert EINSTEIN, *Out of my later years,* Thames and Hudson, London, 1950, p. 87. Also Max BORN, *Physics and Metaphysics, Science News,* 17, Penguin Books, 1950, p. 25.

A NOTE ON THE EPISTEMOLOGICAL IMPLICATIONS OF THE ALPHA-PHONOID THEORY [1]

by

C. R. SANKARAN

We have seen that to every articulatory-acoustical 'event' in the consonant-vowel configuration where the Alpha-phoneme is constructed, there corresponds a point in time, and that the interesting situation arises in our argument that the Dedekind 'cut' in our CV configuration corresponds really to no interval in time.

We may further examine this situation a little more closely here. In order to avoid the real epistemological difficulty, the first alternative that naturally and easily suggests to one is that our infinitely-structured many-dimensional continuum in *time* is one in which the postulate of Dedekind is not verified.[2] But such a suggestion itself is epistemologically significant. According to yet another alternative, the 'cut' in our space-continuum constructed in *time* is purely 'conceptual'. Here there are two subalternatives; either we take the strictly mechanistic view or not.

We proceed with our examination first adopting the strictly mechanistic view, according to which, "the term 'concept' (or 'idea') is simply a traditional obscure synonym for 'speech-form', and what we may call 'mental' events are in part private and unimportant events of physiology and in part social events (responses which in their turn act as stimuli upon other persons or upon the responder himself, namely acts of speech)".[3] From this point of view, our 'cut' is only a verbalisation. There is no such 'thing' at all in reality. Then the logical consequence is that the consonant-vowel configuraton which is at the basis of our theory is really 'discontinuous,' and that there is a precise demarcation between the consonant and the vowel. This consequence is at variance with all the experimental evidence

1. Epistemology and the Alpha-phonoid Theory, published in the same issue of BDCRI, pp. 241-245.

2. Cf. in this connection Bertrand RUSSELL, *Introduction to Mathematical Philosophy*. London, George Allen and Unwin, Ltd.; New York, The Macmillan Co., 1919, p. 71.

3. The above is a quotation with slight verbal changes to suit the context here. It is obvious that BLOOMFIELD is not misrepresented thereby. Cf. L. BLOOMFIELD, Language or Idea? *Language*, Vol. 12, 1936, p. 95.

so far gathered.[4] Granting the possibility of a precision apparatus assigning the physical limit to the change-point in our configuration, it cannot be gainsaid that the logical consequence of 'discontinuity' we are led on to, now, has a deep epistemological significance.

Now let us take the alternative (approaching the question in a little less mechanistic way), that the 'cut' is an 'abstraction'. It is then a mathematical fiction. But to say this is not the same thing as saying that it is 'unreal' or 'non-existent'. It possesses some existence even as the 'form' or 'langue' of TWADDELL and VACHEK possesses.[5] The first consequence of this view is that the alpha-phoneme is a deeper abstraction than even TWADDELL's 'phoneme'.[6] The next inevitable consequence is that this 'cut' which has some existence corresponds to *no* interval in time, and therefore we are perforce compelled to say epistemologically looking at the whole question that this is a state of experiencing *not* within time which results in the resolution into two broad 'partitions', viz., the consonant and the vowel, a consequence already stated in the last para of my paper "Epistemology and the Alpha-phonoid Theory".

4. Vide Manuel J. ANDRADE, Some questions of fact and policy concerning phonemes, *Language*, Vol. 12, 1936, p. 2.

5. Cf. VACHEK, One aspect of the Phoneme Theory, *Proc. 2nd Interna. Congr. of Phonetic Sciences*, London, 1935, Cambridge University Press, 1936, p. 35.

6. W. F. TWADDELL, On defining the Phoneme, *Language Monographs*, No. XVI, Baltimore, 1935.

THE AUSTRO-ASIATIC *LAK IN DRAVIDIAN (TAMIL)

by

C. R. Sankaran

Jean Przyluski[1] gives the principal names of the sexual organs in the Austro-Asiatic language as follows:

Malay Peninsula	*lak, la, lo*
Stieng	*klau*
Bahnar	*k-lao*
Khasi	*t-loḥ*
Santali	*loc*
Ho	*Loc'*
Mundari	*loc'*

The first root **lak* is the base for all the other forms and it is still found in the Malay Peninsula. Its alteration in Khmer is *lûk* 'to drive in (the hand or the finger)'.[2] The Santals have a common word *la* 'to dig or make a hole'.

The *Tamil Lexicon* of the Madras University[3] gives the meaning of the word *Lakkāṭi* (also *lakkāḷi* as 'rowdy, a term of abuse'). It is obviously derived from the Austro-Asiatic root **lak*[3a] so far as the first part of this word at least is concerned and its etymology is possibly now forgotten. It is interesting to note that this word survives only in local usage and is not found in any literary work.

It is easy to connect too, I think, the first part of the Hindustani word *laṅgōṭa* (borrowed in Tamil; also, cf. too Hindi *laṅgōṭi*) 'strip of cloth fitted to the loins as of a wrestler'[4] with the Austro-Asiatic root **lak* and thus treat as another loan word in the Modern Indo-Aryan.[5]

1. P. C. Bagchi, *Pre-Aryan and Pre-Dravidian in India*, Published by the University of Calcutta, 1929, p. 11.
2. *Ibid.*, p. 13.
3. *Tamil Lexicon*, published under the auspices of the University of Madras, 1934, Vol. VI, Part II, 3434.

3a. For the nominal derivatives ending in *-ala-*, *-ula-* in Indo-Aryan, see P. C. Bagchi, *op. cit.*, p. 12.

4. Cf. Tamil *laṅkōṭu, laṅkōṭa* and *laṅkōṭi*, *Tamil Lexicon*, *Op. cit.*, p. 3435.
5. Hindi *laurā* > Tamil *lavaṭā* 'membrum virile' may have also some possible connection with the original Austro-Asiatic root **lak*. Similarly also the Tamil word *lavāṭi* 'Prostitute', *Tamil Lexicon*, *Op. cit.*, p. 3437.

We see as J. PRZYLUSKI has shown that the original Austro-Asiatic **lak* appears as *k-lao* in Bahnar.[5a] This, for purposes of convenience, I should like to describe as syllabic metathesis[6] in contradistinction to what might be described as phonemic metathesis found for example in the Tamil word *a-lk-ul* (a name of sex organ).[7]

I venture thus to suggest that the Austro-Asiatic **lak* survives in the Tamil word *alk-ul.*

The semantic history of this word is very interesting. It seems to have acquired first the more elevated sense of 'waist'.[8] The tendency to acquire the 'elevated sense' has been shown by this word even in old Tamil, for in *Pattuppāṭṭu* we find it used in the sense of 'side'.[9]

I suggest that as the waist is usually indicated by touching both the right and left hand sides of the hips, the transition of the passage of meaning from the waist to the side may not have been very great (with the Tamil *alkul* compare Malayāḷam *alkiṭam*). Indeed this hypothesis is verified by the telling passage in *Perumpāṇāṟṟuppaṭai*,[10] where *alkul* can be taken in both the senses of 'waist' and 'side'. But even in middle Tamil the original sense of 'Pudendum muliebre' also seems to have been retained.[11]

Doubtless in the old Tamil of the Sangam age, *alkul* meant 'genital organ'[12] and there seems to be thus every justification for postulating the existence of the Austro-Asiatic **lak* in *alk-ul.*

5a. P. C. BAGCHI, *Op. cit.*, p. 11.

6. In connection with the phonemic metathesis in Tamil *alk-ul* possibly from the original Austro-Asiatic root **lak*, I wish incidentally to draw attention here to a very interesting reverse phenomenon of the original initial *a-* of *aḻi* coming to be represented by the aphaeresized vowel *a* in *layy-*. Vide L. V. Ramaswami AIYAR, Tamil *ḻ* JORM, Vol. IX, 1935, p. 143, Cf. also Tel. *lē* = Tam. Kan. *eḻ*. Tel. *gruyyi* = Tam-Kan *Kuḻi*. [Note that L. V. Ramaswamy AIYAR writes *ḻ* for *ḷ*. for a discussion on this phoneme, see my *Phonemics of Old Tamil*, p. 23, footnote 55.]

7. See *Nālāyira Divya Prabandham—Āṇḍāl, Tiruppāvai*, 11, line 4, and also Kulasekhara *Āḻvār, Perumāḷ, Tirumoḻi* 4, 10, line 2. B. Ratna NAYAKAR and Sons Ed. Madras, pp. 130 and 178.

8. Cf. Kulasekhara *Āḻvār, Perumaḷ Tirumoḻi* 9, 7. *Pūntukil cēr alkul Kāmar eḻil viḷal uṭuttu*, B. Ratna Nayakar & Sons ed., pp. 189-190 also, *'Puṟṟara valkul puṉamayilē!'; Tiruppāvai*, verse 11, p. 38, P. ŚRI, Alliance Co., Madras, 1948. Cf. also, *Kamparāyaṇam, Sundarakhāṇḍam, Urukkāṭṭupaṭalam*, with a commentary by V. M. Śaṭakōparāmānuja ACHARIYAR, et. al., Madras, 1939, verse 106, p. 463; Cf. also *Tiruppāvai*, P. ŚRI, p. 66, verse 20.

9. Cf. *Kavaittāmpu toṭutta kāḻ-uṉṟ-alkul. Perumpāṇāṟṟuppaṭai*; *Pattuppāṭṭu*, line 244, U. V. Swaminatha IYER's 3rd ed., 1931, pp. 195 and 234.

10. Line 329, p. 199 and 242. U. V. Swaminatha IYER's 3rd ed., 1931.

11. Cf. Māṇikka Vācaka SWAMIKAL, *Tirukkōvaiyār*, 9. Vide also *Tamil Lexicon*, Madras University, 1931, Vol. I, part I, 140.

12. Cf. for instance *Kuṟuntokai* edited by U. V. Swaminatha AIYAR, 1937, stanzas 27, 101, 180, 345. In *Paripāṭal*, U. V. Swaminatha IYER's ed., 1935, 13, line 54, p. 109.

Lastly, the significant compound *alkuṟu-poḻutil* (literally meaning, 'in the time for *alkul*') met with in *Kuṟūntokai*[13] should not be lost sight of. It seems to be a naked descriptive term suggestive of the joys of love temporally conditioned by night, as suggestively delineated by truly classical artists (portraying in a telling manner what speech is not calculated to express) such as Bhavabhūti in the most delicate and refined manner[14] (in the true sense of the term) possible in the following immortal verse:

Kimapi kimapi mandam mandamāsakti yogāt
aviralita-kapolam jalpatorakrameṇa
aśithilaparirambha-vyāpṛtaikaikadoṣṇor
aviditagatayāmā rātrirevavyaraṁsīt.[15]

It is significant that *akkuḻ* in Tamil means armpit [cf. M. *akkuḻam*. Also cf. *akkuḻu* 'to tickle', *Tamil Lexicon,* Madras University, Vol. I, Part I, p. 7.]

13. Stanza 273, U. V. Swaminatha IYER's ed., p. 650. *Alku* itself came to mean 'night' apparently later, see *Tamil Lexicon,* Vol. I, p. 140.

14. Cf. "Moderns have an outward purity of language; the ancient church, with the Bible, a fearless plainness of speech which belongs to inward purity ...... the purity of modern times is not the purity of the Gospel; it is the purity of those who know and have delighted in evil as well as good; it is often the hypocritical purity which would willingly dwell upon 'things which ought not to be named' so that it does but not name them: it is a veiled impurity; and, what is in itself pure and speaks purely of things impure, it associates with its own impurity and calls impure, because itself thinks impurely. And so the very Bible has become to them, what they call 'improper', i.e., 'unbefitting them', verifying here in the awful Apostolic saying, 'unto the pure all things are pure; but unto them that are defiled and unbelieving is nothing pure; but even their mind and conscience is defiled'. Thus much must be said, because it is easy to foresee that an age of spurious delicacy, i.e. of real indelicacy, will raise charges of indelicacy against passages in the Fathers, (as it does, though in a lower murmuring tone, against the Bible), when the fault is in itself. And would that there were not occasion for the warnings of St. Augustine, and that many in Christian England did not imitate the unbaptized Carthaginians, or require his earnest language against being ashamed of being innocent." *The confessions of St. Augustine,* translated by E. B. PUSEY, Everyman's Library, Preface, pp. xxvi-xxvii, reprinted in 1949.

15. "While those delicious nothings (*kimapi*) softly, gently—cheek meeting cheek in [close] contact—we kept talking at random; while a fast embrace kept of us both a hand each engaged—its watches speeding unnoticed [in successions]—thus did the night come to an end!"

Bhavabhūti, *Uttararāmacaritam,* Nirnayasagar Press ed., Bombay 1939, Act. I, Verse 27, p. 31. The translation is from S. K. BELVALKAR's *Uttararāmacaritam,* Part I, Introduction and translation, Cambridge, Massachusetts, Harvard University Press, 1915, The Harvard Oriental Series, vol. 21, pp. 22-23.

Rātrireva vyaramsīt is significant ['the night itself has sped'] like the telling lines of Wordsworth:

"The music in my heart I bore
Long after it was heard no more"!
The rest of the poem may even be wiped out!

In discussing amorous fetishism, Vernon W. GRANT (A Fetishistic Theory of Amorous Fixation, *The Journal of Social Psychology*, 1949, 30, p. 27) observes that "the unusual feature of a fetishistic attraction may lie mainly in the 'erogenic' character of a bodily zone which for most people is more or less neutral in value". I suggest that it is possible to derive the speech-from *akkuḻ* from *alkul* phonetically in the following manner. *Alkul* > **a* (l) *kuḻ* > *akkuḻ*. The loss of the first *l* is compensated by doubling of *k* and the transformation of the final *l* into *ḻ*. I seek the origin of this change clearly to a deeper psychological tendency —viz., the fetishistic amorous fixation. For, on that hypothesis the semanto-phonetic development of *alkul* to *akkuḻ* seems to be clear. The passage of transference of meaning in the later phonetically transformed speech-form is now obvious.

VOWEL-LENGTH*

by

A. D. TASKAR

[Abstract: —

The re-examination of the data of Prof. Harry A. ROSITZKE in his study of vowel-length in General American Speech with the technique of Analysis of Variance, reveals that the voiceless and voiced consonants are not affected by the quality of the preceding vowel, which appears to confirm that the problem of Speech-Structure should be attacked anew from the point of view of the Alpha-Phonoid Theory, taking into consideration the entire configuration of the consonant and the vowel (or vowel and consonant as the case may be) to-gether.]

Prof. Harry A. ROSITZKE[1] has studied the variations in the vowel-length of General American Speech by taking extensive kymographic recordings of lexial pronunciations of words of the type stop-vowel-stop and stop-vowel. Five subjects from different regions of America were selected to represent 'the normal variety of General American characteristic of educated middle-class pronunciation'. Thus the main factors considered were: Persons (P), Kind (K) and Position (P'), where K denotes different vowels including diphthongs and P' the position of the vowel, i.e., before a voiced or voiceless consonant or in the final position.

The author of the present paper does not want to enter here into the question[2] whether in any way the vowel-length is affected by the presence of voiced or voiceless consonants. It is clear that by the application of purely statistical methods the precision of the investigations can be increased and also better conclusions can be obtained.

The conclusions based on averages and percentages without weighing all the variables, are sometimes misleading. Instead of judging the results by either of these methods, it is important when the data is presented in a complete form such as this, where more than one factor are simultaneously considered, to separate out the various main effects and their interactions, i.e.,

* I am indebted to Prof. C. R. SANKARAN for his valuable guidance in writing this paper.

1. Harry A. ROSITZKE: Vowel-length in General American Speech, *Language*, vol. 15, 1939, pp. 99-109.

2. R-M.S. HEFFNER: A Note on Vowel Length in American Speech, *Language*, vol. 16, 1940, pp. 36-40.

TABLE I*

	R			L			M			D			H		
	Before Mediae	Before Tenues	Final	Before Mediae	Before Tenues	Final	Before Mediae	Before Tenues	Final	Before Mediae	Before Tenues	Final	Before Mediae	Before Tenues	Final
i	30·5	14·5	29·5	28·4	15·9	34·8	30·7	20·1	40·2	26·4	18·9	35·2	31·9	20·4	41·0
u	29·1	13·4	28·1	29·2	15·7	39·8	32·2	19·0	40·0	27·9	16·5	33·9	29·8	20·7	39·6
e	32·3	20·2	33·8	28·4	20·4	42·7	37·2	22·4	42·9	27·9	20·2	41·3	30·7	24·4	43·6
o	32·7	16·1	33·6	30·8	18·1	41·8	33·2	22·6	41·2	30·3	20·2	37·1	32·9	23·9	42·9
ə	32·0	26·7	34·9	33·9	21·0	43·7	37·7	28·9	40·5	31·6	21·8	33·1	36·2	25·8	41·8
a	31·9	16·7	34·2	33·4	19·4	41·4	37·5	27·1	38·7	32·6	23·3	34·7	33·6	24·0	44·3
aɪ	35·8	19·2	41·8	39·1	22·5	44·4	39·6	22·4	42·2	33·9	25·1	44·9	39·3	26·7	45·5
aʊ	34·7	21·5	39·0	32·3	22·9	42·0	39·0	24·4	34·3	33·5	24·2	40·3	37·0	26·0	47·0

* The omissions made here from Harry A. Rositzke's data (cf. *Language*, Vol. 15, 1939, pp. 101-2) [viz. the measurements of (i) all the short vowels (ii) the so-called long vowel (?) (iii) one diphthong] are, it is obvious, purely due to technical reasons.

first-order, second-order, etc. This sort of analysis is known as Analysis of Variance. The aim of such an analysis is to separate out for studying the particular main factors and their interactions from the total variation, and finding out the error term to determine the precision of the investigations. The main effects are found first by means of various one-way tables. The first-order interactions are obtained from two-way tables by subtraction of the main effects. The three-way tables similarly give second-order interactions after corresponding main effects and first-order deductions have been made.

To understand the full implications of the method to be adopted it is thought useful to adhere to the analysis of the data presented in Table-I. The same can be extended to any particular problem. Before proceeding to the analysis of variance for the table as a whole let us first of all study separately the variations in vowel-length by the presence of voiced and vioceless consonants and the vowel in the final position.

" Between 40 (measurements) 39 independent comparisons can be made and so the total number of degrees of freedom will be 39 ".[3] This number is divided into 3 parts a) between persons b) between vowels, and c) representing the discrepancies between the relative action of different persons on different vowels, which provide a basis for estimation of error. Thus the total sum of squares, representing the total variation due to all causes between 40 measurements, is divided into 3 portions measuring respectively the amount of variation between persons, the amount of variation between vowels and the amount of discrepancy between the action of different persons on different vowels.

TABLE I (a)

Analysis of Variance — Before Voiced

Source	D. F.	Sum of Sq.	Mean Sq.	F
Persons ..	4	134·994	33·748	15·92**
Kind ..	7	275·272	39·324	18·55**
Error ..	28	59·374	2·120	
Total ..	39	469·640		

It is seen from the value of F for Persons and kind that there is very significant variation in vowel-length at both the places. This shows that

3. R. A. Fisher: *The Design of Experiments*, Oliver and Boyd, 2nd ed., 1937, p. 58.

before consonants of the voiced type the different vowels behave very differently, as is otherwise obvious. Similarly in case of persons it can be deduced that the persons pronounce the vowels before a voiced stop in different manners.

In the case of vowels preceded by the voiceless consonants the variations in vowel-length due to both the effects — Persons and Kind — are statistically significant.

TABLE II (a)

Analysis of Variance — Before Voiceless

Source		D. F.	Sum of Sq.	Mean Sq.	F
Persons	..	4	179·114	44·778	13·72**
Kind	..	7	266·924	38·132	11·69**
Error	..	28	91·366	3·263	
Total	..	39	537·404		

The mean square of Kind is remaining more or less of the same magnitude in both the tables I (a) and II (a), showing thereby that the same sort of variations are present in the two cases of (i) before voiced and (ii) before voiceless consonants. Greater mean square for Persons and error are conclusive of the fact that greater fluctuations are seen in persons when the vowel is preceded by a voiceless than a voiced consonant.

The difference in the effects of two types of consonants can be further obtained by analysing the individual differences.

TABLE I (b)

Analysis of Variance of Individual Differences

Source		D. F.	Sum of Sq.	Mean Sq.	F
Persons	..	4	119·438	29·859	5·12**
Kind	..	7	83·082	11·869	2·03
Error	..	28	163·310	5·832	
Total	..	39	365·830		

It will be seen from the above table that the values of mean square for Kind and Persons are further reduced. But the value for the error term is slightly enhanced thereby making the value of F for Kind 2·03 which is statistically not significant. It can be deduced, therefore, that there is no significant variation in the effects of the two types of consonants due to the association with different vowels, and much labour on the experimental side will be saved if the investigations are carried out with limited number of vowels and with better plan of repetition.[4]

Now let us proceed with the problem of the vowel in the final position. The table of analysis of variance can be presented as follows :

TABLE III (a)

Analysis of Variance — Final Position

Source		D.F.	Sum of Sq.	Mean Sq.	F
Persons	..	4	217·896	54·474	7·69**
Kind	..	7	378·366	54·052	7·63**
Error	..	28	198·306	7·082	
Total	..	39	794·568		

The increase in the mean square for all the factors seems to be due to the consideration of vowel-length in the final position with no specific regard to the type of the consonants which precede the vowel, i.e., it is the average effect of these two types of consonants.

In the following table is presented the analysis of variance when all these factors are considered at one and the same time.

All the three main factors have very large mean square and the values of F for these are statistically significant, showing thereby that greater variations are observed with respect to different persons and vowels and highest in case of different positions. The interaction between Kind and Position

4. *Ibid.*, p. 66.

TABLE II (b)

Analysis of Variance

Source		D.F.	Sum of Sq.	Mean Sq.	F
Persons	..	4	471·003	117·751	27·393**
Kind	..	7	649·784	92·826	21·587**
Position	..	2	6635·555	3317·778	771·576**
Persons-Kind	..	28	108·248	3·866	$(3{\cdot}866)^{-1}$
Persons-Position	..	8	221·471	27·684	6·438**
Kind-Position	..	14	110·308	7·879	1·832
Error	..	56	240·798	4·300	
Total	..	119	8437·167		

and the interaction between Kind and Persons are not statistically significant. From these non-significant values of the above named interactions it is seen, that though different vowels have different lengths they have got very little to do with respect to their position and with different persons. It is confirmed, therefore, that Kind is playing a very minor part in the investigations. The significant value for Persons-Positions interaction suggests that speakers are prone to pronounce the vowels in different positions, i.e., before voiced or voiceless or in the final position in quite different ways.

It is suggested, therefore, that the entire problem of vowel-length must be examined from the point of view of newer and wider perspectives opened by the α-phoneme theory in order to enable us to understand the real effects of voiced and voiceless consonants.[4a] For, the vowel is only a necessary condition for the occurrence of the so called *Āytam* in Tamil. The quality of the vowel does not appear to affect the particular allophone of the *Āytam*. For instance, *a* or *e* does not affect α_1 (that allophone of *Āytam* which ap-

4a. C. R. Sankaran and S. Sourirajan: A Physico-Physiological Theory of Human Speech, BDCRI., vol. 6, 1945, p. 244.

pears before *k*). Similarly *a* or *i* does not affect α_4 (that allophone of *Āytam* which appears before *t*) and so on.[5] It is considerations like these which have led Prof. C. R. SANKARAN not only to the definition of phoneme as a class of similar classes[6] but also to the more important and daring conception of what may be called *Structuralism* in phonetics. His work starting with an attempt to determine the phonemic status of *Āytam* has opened up vistas and newer perspectives (see his formulation of the Alpha Phonoid concept in his recently published work).[7] Our analysis appears to fit in with this view in opposition to the earlier view.[8] It is also interesting to compare our conclusions here with that reached by H. JUNKER (see Die Bedeutung der Vokale, *Arch. für Vergleichende Phonetik,* 223-48, 1938. *American Speech,* vol. 14, 1939, 152-3) that in the Indo-European syllables the vowels act as the supporting nuclei while the consonants supply the marginal contour acoustically as well as functionally.[9]

5. C. R. SANKARAN and N. K. SRINIVASAN, The Phonemic Variants of Aytam in Old Tamil, BDCRI, Vol. II, Nos. 3 and 4, pp. 348-50. See especially diagrams on p. 350.

6. C. R. SANKARAN: *Phonemics of Old Tamil,* Deccan College Monograph Series, No. 7, 1951, pp. 21-22, and his paper on speech-structure, Addendum I, in this issue of BDCRI, p. 233.

7. C. R. SANKARAN: *Phonemics of Old Tamil,* Deccan College Monograph series No. 7, 1951, pp. 2, 20 and 34.

8. Cf. John W. BLACK: The Effect of the Consonant on the Vowel, J. A. S. A., vol. 10, 1938, pp. 203-205.

9. Cf. S. SOURIRAJAN and C. R. SANKARAN: The Utterance Continuum and the Alpha Phoneme, BDCRI, vol. 6, No. 2, 1944, p. 97, footnote 1a.

QUANTITATIVE ANALYSIS OF LANGUAGES *

by

A. D. TASKAR

[Abstract: —

It is attempted in this paper to establish the genetic relationship among the Indo-European languages, with the tool of analysis of variance by following Missing Plot Technique.]

KROEBER and CHRÉTIEN[1] had undertaken a study of the Indo-European Family strictly through quantitative method by choosing 74 elements. Their investigations went not beyond finding out the coefficients of association to determine the inter-relationships between the family members. The author of this paper in collaboration with Prof. C. R. SANKARAN and P. C. GANESHSUNDARAM[2] separated out Morphological and Phonological elements and by adopting similar methods showed the existance of Celtic-Italic, Baltic-Slavic and Iranian-Sanskrit sub-groups in the family for both Morphology and Phonology. But the investigations were carried out on the assumption that all these languages together as an aggregate do form a family. The question of primary importance as to the very existence of the family was not handled purely by quantitative methods. The main aim of this paper is to show by the tool of analysis of variance the possibility of such a demonstration.

Table—1[3] gives the distribution of phonological elements collected by KROEBER and CHRÉTIEN. The meaning of the various symbols used in the table has been clearly stated in the previous investigations. Consider for the time being that the symbols other than — and + supply no information. Then before commencing with the analysis of variance all these various symbols will have to be estimated in terms of two extreme — and +. If values t_1

* I take this opportunity to express my gratefulness to Dr. PRAMANIK and Shri K. Nagabhushan RAO of the Meteorological Office, Poona, for their kindness in putting at the disposal of Shri. P. C. GANESHSUNDARAM and myself one of their calculating machines, with which we did the greater part of our calculations the results of which are presented both in this paper as well as in our earlier paper " Quantitative Classification of Languages ", *BDCRI*, Vol. 10, 1950, pp. 85-111.

1. A. L. KROEBER and C. D. CHRÉTIEN: Quantitative Classification of Indo-European Languages, *Language*, vol. 13, pp. 83-103.
2. C. R. SANKARAN, A. D. TASKAR and P. C. GANESHSUNDARAM: Quantitative Classification of Languages, *BDCRI*, vol. 10, 1950, pp. 85-111.
3. *Ibid.*, Table I, p. 90.

and t_2 have been assigned to these extremes then the values of the other symbols are the functions of t_1 and t_2. Let us put in numerical terms 0 for — and 1 for +.

The method that has been adopted in estimating the values of other symbols is similar to that which is usually done in a problem with numerical values when such values are lost through circumstances beyond the experimenter's control. This is called Missing Plot Technique.[4] The table so completed will not, of course, be as good as if it had been otherwise but there is no reason to suppose that the information so recovered will be disproportionate to the value of the table as a whole. As the proportion of the symbols supplying no information is comparatively small, the effect of replacing them by the estimates is hardly likely to affect judgment of significance seriously.

By minimising the term for residual, the set of linear equations are obtained as follows:

$$922x - 99y - 11a = 308$$
$$-99x + 1470y - 198a = 687$$
$$-11x - 198y + 886a = 305$$

where $x = (-)$, $y = (+)$ and $a = ?$

The values of x, y and a which satisfy the above set of equations are:

$$x = 0{\cdot}39966$$
$$y = 0{\cdot}55833$$
$$a = 0{\cdot}47380$$

4. M. G. KENDALL: The *Advanced Theory of Statistics*, Vol. II, p. 229 ff., Charles Griffin Co., Ltd.

I am most indebted to Prof. D. D. KOSAMBI, Professor at the Tata Institute of Fundamental Research, Bombay, for suggesting this technique and for the most valuable guidance he has given me throughout my investigations embodied in this paper. In this connection, I may cite, with his very kind permission, the following words of his, referring to my work here (in a private communication to me dated 2nd February 1952):

"Analysis of variance is *quite* valid in the missing plot technique provided the corresponding degrees of freedom are subtracted from the residual".

Referring to the application of FISHER's serological problem (R. A. FISHER: *Statistical Methods for Research Workers*, 8th ed., 1941, pp. 283-292) to my present investigations with which I started earlier, he says (*ibid.*) further, "the whole problem seems rather uninteresting to me because of the poor nature of the data and the symbol '?'. FISHER's serological example certainly does *not* apply."

In the light of these remarks of Prof. KOSAMBI, the reason for abandoning my earlier plan of considering the problem as an analogue to FISHER's serological example is quite clear; also the successful application of missing plot technique to the present problem is, I need hardly say, obvious!

It is a point to note that the value of a lies between the values for x and y. With these values the analysis of variance for Table-1 is:

TABLE (A)

Analysis of Variance with the same value for the symbol '?'

	D.F.	Sum of Sq.	Mean Sq.	F
Languages ..	8	3·45276	0·43159	2·02425
Elements ..	29	6·38248	0·22008	1·03222
Error ..	229	48·82574	0·21321	
Total ..	266	58·66098		

It can be definitely said that there is no significant variation among the elements. But for languages the value of P lies between ·05 and ·01. It cannot, therefore, be said decisively that languages belong to the same family. The level of significance to some extent is a matter of individual choice. Still however when P lies between ·05 and ·01, it can only be said that the data do not provide any definite evidence to that effect and a new experiment will have to be arranged.

It is, therefore, clear from the foregoing para that the set of phonological elements cannot prove the genetic relationship between the languages under consideration. Let us now turn our attention to the separate examination also of the other set of morphological elements. Such an analysis is presented in table (c).

The question naturally arises whether anything has been actually lost by assigning the same value to the symbols '?'.[5] With different values to the symbol '?', the linear equations are as follows:

$$\begin{aligned}
922x - 99y - 5a - 5b - 5c + 4d &= 308\\
-99x + 1470y - 9a - 39b - 9c - 141d &= 687\\
-5x - 9y + 232a - 8b - 8c + d &= 77\\
-5x - 39y - 8a + 232b - 8c + d &= 47\\
-5x - 9y - 8a - 8b + 232c + d &= 167\\
4x - 141y + a + b + c + 232d &= 14
\end{aligned}$$

5. Putting d for '?' in Celtic (element number 28) and a, b and c for '?' in Armenian (element numbers 38, 39 and 26 respectively).

The solution of the above equations is

x	y	a	b	c	d
0·39934	0·54686	0·39854	0·34190	0·77354	0·37929

It will be seen from the values of a, b, c and d that they range from ·34 to ·77 which means that this way of assigning, in addition supplies some information regarding the importance of the elements with respect to the data collected. The element c seems to carry valuable information which is not supplied by b. In the following table is given the analysis of variance with the above values.

TABLE (B)

Analysis of Variance with Different Values to the symbols '?'

	D.F.	Sum of Sq.	Mean Sq.	F
Languages ..	8	3·49713	0·43714	2·02783
Elements ..	29	6·52848	0·22512	1·04430
Error ..	226	48·71871	0·21557	
Total ..	263	58·74432		

Comparing the mean square for items in this table with the previous one it is apparent that nothing much has been gained in the analysis by assigning different values to the symbol '?', beyond arranging them with respect to the data collected.

Proceeding with Table-2 of morphological elements we get the equations as:

$$344x - 7y - 8a = 60$$
$$-7x + 690y - 7a = 141$$
$$-8x - 7y + 344a = 60$$

of which the solution is

$$x = 0{\cdot}18290$$
$$y = 0{\cdot}20806$$
$$a = 0{\cdot}18290$$

The table of analysis of variance is as follows:

TABLE (C)

Analysis of Variance — (Morphology)

	D.F.	Sum of Sq.	Mean Sq.	F
Languages ..	8	3·49714	0·43714	1·9459
Elements ..	43	8·49594	0·19758	$(0\cdot19758)^{-1}$
Error ..	341	76·60297	0·22464	
Total ..	392	88·59605		

The mean square for Elements is sub-normal. In such a case, it is useful to combine this term to the error term to get the joint estimate for the error term. In that case also, the value of P lies between ·05 and ·01. Hence it suggests that the analysis of variance with all the 74 elements is likely to shed some light on the problem.

It leads to the conclusion that instead of examining the two groups separately, it is more correct to combine these elements together and then test the significance.

The result of such an analysis gives the equations as

$$\begin{aligned} 2904x - 248y - 47a &= 878 \\ -248x + 4910y - 497a &= 1603 \\ -47x - 497y + 2832a &= 741 \end{aligned}$$

and the solution as

$$\begin{aligned} x &= 0\cdot33997 \\ y &= 0\cdot37741 \\ a &= 0\cdot33351 \end{aligned}$$

The table of analysis of variance can be presented in the following manner.

6. C. R. Sankaran, A D. Taskar and P. C. Geneshsundaram: Quantitative Classification of Languages, BDCRI, Vol. 10, 1950, Table—2, p. 91.

TABLE (D)

Analysis of Variance of Morphological and Phonological Elements taken together

	D.F.	Sum of Sq.	Mean Sq.	F
Languages ..	8	0·76975	0·09622	$(0{\cdot}09622)^{-1}$
Features ..	1	0·03950	—	$(0{\cdot}03950)^{-1}$
Languages-Features ..	8	5·72291	0·71536	3·2890**
Error ..	645	140·29000	0·21750	
Total ..	662	146·82216		

It can be definitely said by looking up the figures of mean squares that the languages come from the same family. Hence what could not be proved by studying either the set of phonological elements or the set of morphological elements separately could be proved by considering both the sets as forming together one single unit. The significant value of *F* for the interaction between Languages and Features suggests itself that though the effects of these two features are the same for the family as a whole, they are showing different relations with different languages except the sub-groups Baltic-Slavic, Sanskrit-Iranian and Celtic-Italic.

Thus through a purely quantitative approach, we arrive at a far reaching conclusion (even beyond SAPIR's[7]) that restricting ourselves either to phonology or even to morphology we cannot in general establish genetic relationships between any two given languages, unless these languages are closely related to each other like Baltic-Slavic which is only a matter of pure chance occurrence (or matter of sheer accident!) from the point of view of our methodology.

Also since the method of the analysis of variance, which a perfected tool of purely quantitative method, applied to two sets of phonological and morphological elements both taken to-gether, establishes the genetic relationship of languages under consideration, even the necessity of entering into the question of parallel vocabularial forms[8] in these languages for establishing such a genetic relationship among them, does not arise. For, the results arrived at by the application of quantitative method will be taken as more reliable; thus the quantitative method effects a welcome economy and is not to be discarded.[9]

I am very much indebted to Prof. C. R. SANKARAN for his valuable guidance in writing the paper.

7. E. SAPIR: *Language*, vol. 1, 1925, pp. 37-51 especially pp. 47 ff. and also C. R. SANKARAN, A. D. TASKAR and P. C. GANESHSUNDARAM: Quantitative Classification of Languages, *BDCRI*, vol. 10, 1950, p. 86.
8. *Ibid.* p. 89.
9. Cf. C. Douglas CHRÉTIEN: The Quantitative Method for determining Linguistic Relationships, Interpretation of Results and Texts of Significance, University of California Publications in Linguistics, Vol. I, No. 2, p. 19.

REVIEWS

Popular Essays in Indian Philosophy—Vol. I, *The Quest After Perfection*—Vol. II, by PROF. M. HIRIYANNA, M.A., Retired Professsor of Sanskrit, Mysore University, Kāvyālaya Publishers, Mysore, 1952, (Price each Vol. Rs. 5 or 7s. 6d.)

The late Prof. M. HIRIYANNA is well known to all advanced students of Sanskrit, particularly to those of Indian Philosophy through his two books *Outlines of Indian Philosophy* and its abridgement *Essentials of Indian Philosophy*, which are very popular for the clear elucidation of many subtle philosophical doctrines of various schools in a simple, unambiguous language. His critical editions of Sureśvarācārya's *Naiṣkarmyasiddhi*, Vimuktātman's *Iṣṭasiddhi* and others are models of such publications. He has also published several articles and delivered public lectures on many philosophical topics; and they are now collected and published in these two Volumes (under Review).

The first Volume contains seventeen essays mainly dealing with the theoretical and practical aspects of Indian Philosophy. The first essay on 'The Training of the Vedāntin' well elucidates the practical aspects of Vedānta—*who is the qualified person to study Vedānta?*, etc. It emphasizes the important fact that Indian philosophers have kept their theories in close contact with life and have not tolerated the slightest divorce of practice from precept. The Vedāntic or spiritual discipline that one has acquired has to march successfully through three stages: (1) the strict observance of social morality as found in our *varṇāśramadharma*, (2) the *niṣkāmakarmānuṣṭhāna* and *upāsanā* and (3) Renunciation (Vairāgya). These would lead to the realisation of the Highest and the final liberation of man. In this connection the learned Professor discusses the importance and value of *Revelations* in our Śāstras, which alone can tackle the supernormal problems in contrast with *reason* which, according to Indian thinkers, has no finality in its operations.

The "Aim of Indian Philosophy" is the second topic which also explains the importance of the practical aspect of Vedānta. The final aim of Philosophy is described as *mokṣa*—the liberation of man from the bondages of Ignorance—*ajñāna*, which can be removed only by the Knowledge of Ātman; and this *ātmajñāna* can be attained by the threefold *sādhana*—*śravaṇa*, *manana* and *nididhyāna*.

The third essay is "Types of Indian Thought" which analyses the well-known *pramāṇas* into two groups—one assuming that Reality is confined to

common experience—*pratyakṣa* and *anumāna*—generally known as *empiricism* and the other formulating a *unique pramāṇa* for the knowledge of transcendental Realm and seeking the aid of *Revelation* for it, the latter often called *Intuitionalism.*

The fourth is 'Karma and free will' which elucidates the doctrine of *Karma* in its manifold aspects. It repudiates the criticism that *Karma* stands for fatalism and explains the place of free will or self-determination in it. The fifth in the '*two-fold way of Life*' which illustrates the two ways of life—the *pravarttimārga* and the *nivṛttimārga* from the two well-known poems—Aśvaghoṣa's *Buddhacarita* and Kālidāsa's *Kumārasambhava*. Here the learned Professor makes an observation that 'he (Kālidāsa) has not escaped criticisms at the hands of fastidious Ālaṁkārikas for choosing the *sambhoga śṛṅgāra* of Lord Śiva and Pārvati in *Kumārasambhava*'. It may *be observed here that Ānandavardhana, the greatest champion of dhvani doctrine, has defended Kālidāsa in his Dhvanyāloka that the love delineated therein does not appear vulgar* (*grāmya*) *because of the extra-ordinary creative power* (*śakti*) *of the poet which makes the delineation very beautiful and attractive.* The essay on 'Reincarnation' emphasizes the doctrine of the immortality of the soul and its transmigration and pre-existence, while that on 'the world and the Individual' explains their mutual relation and their final absorption in the Absolute, since one and the same Brahman can appear as the world and the Individual jīva (according to the Advaitins).

The essay on 'Sāṅkhya system' contains a detailed study of the important doctrines of Sāṅkhya philosophy (along with its counterpart—the yoga system). It is dualistic by admitting two ultimate entities—*prakṛti* and *puruṣa*. Out of *Prakṛti* is evolved the objective universe in its infinite diversity. *Prakṛti* is also known as *complex* because it is constituted of three *guṇas*—*sattva, rajas* and *tamas* by which the differences in its transformations are explained. *Puruṣa* represents the element of awareness or *sentience* which *Prakṛti* does not possess. Both of them are known as acting or co-operating together. The knowledge of absolute distinctness of *Prakṛti* from *Puruṣa*—called *Vivekajñāna*—which is the final aim of life, leads one to the final goal—Kaivalya.

The essay on 'The Idea of Puruṣārthas' contains an analysis of the four human values while the essay on 'the Upaniṣads' elucidates the important teachings of those sacred texts, viz., *Jñāna* or knowledge of the Ultimate Reality and its important means *vairāgya*—complete detachment. The commemoration address on 'the Value of Sanskrit Learning and Culture' well explains the richness of Sanskrit language and many a valuable treasure in it which is still unknown to the world, and pleads for the safe preservation of those treasures. The essay on 'The Ethics of Advaita' deals with

the nature and function of *Māyā*, which in deluding man obscures the ultimate Reality from him and prescribes the ethical remedies to be adopted: (1) rising above the feeling of egoism by renouncing all private or personal interests (2) cultivation of universal love for all, leading to the fundamental oneness of all.

The two essays on 'Māyā' again reiterate the nature and function of Māyā. It is explained as the Ignorance of ultimate Reality or *ajñāna* of Brahman. Its existence is proved by the reminscent experience of a person who wakes up from deep sleep, viz., that he slept happily and did not know anything. It also answers the charge that to the Advaitin the entire material world is only a figment of imagination. It deserves vividly the two mysterious powers of *māyā—āvaraṇaśakti* and *Vikṣepaśakti*, the former concealing the real nature of the object while the latter misrepresenting it as something else; this helps one to a great extent to explain the empirical reality of the phenomenal world.

The essay on the "knowledge and devotion" emphasizes that the devotion—*bhakti*—which is nothing but love for God in the spirit of self-surrender is the means of the knowledge of God. Devotion is also described as, just like knowledge, having two forms—one more profound than the other, and the love of the profounder type is even called the direct cause of salvation, according to Indian Theism. The essay on "Six points of view" attempts to give a short account of the six orthodox systems of Philosophy—Nyāya and Vaiśeṣika, Sāṅkhya and Yoga and Pūrva and Uttara Mīmāṁsās from their different viewpoints of matter and spirit; the word *darśana* is translated by the learned Professor as "Point of view" but its *true implication in reference to these six systems lies in the fact that they aim at the intuitionalistic knowledge of what each system contemplates as the Highest.* The Nyāya and Vaiśeṣika systems postulate redical pluralism in that they admit infinite number of ultimate reals, one different from the other. They accept the doctrine of *ārambhavāda* which explains the cause and the effect as two separate entities while the Mīmāmsakas and the Sāṅkhyas POSTULATE *Satkāryavāda*, that is, the effect is only a new transformation of what has already existed as the cause. The Advaitins among the Vedāntins also accept the *satkāryavāda* but the effects are nothing but the manifestation or transfiguration of one ultimate cause, which alone is real. The Mīmāṁsā system is also *pluralistic* just like the Nyāya-Vaiśeṣika in that it admits of the ultimate reality of individual jīvas. To Kumārila self is both the subject and the object in knowing but the Sāṅkhya splits these two aspects—one the true self and the other the internal organ which is the *notself* being a product of *prakṛti.* The Vedānta system of which only the advaita is dealt with in this essay is *monistic* while the other systems like the *dvaita* and the *Viśiṣṭādvaita* are *dualistic*. The last essay in this volume "Indian Philosophy" contains a rapid survey of the growth of the philosophic

thought in ancient India and its distinctive feature and it is only a reiteration of what has already appeared in the essay on "Six points of view".

The second volume which contains eight essays begins with the "Ethics of Upaniṣads". It gives the true explanation of the five *Kośas* as found in the *Taittirīyopaniṣad* of which the *manomayakośa* and the *vijñānamayakośa* are directly related to man's moral life. It also describes rightly the true aim and end of moral life, viz., the overcoming of evils like hunger and desire, by the performance of the prescribed rites—both obligatory and conditional. The essay on "the place of feeling in conduct" explains the importance of *vairāgya*—renunciation—for higher spiritual discipline which involves a sense of feeling of value or interest not at all prompted by selfish propensities, but aiming at self-conquest by subjective purification. The essay on 'the Indian conception of values' gives a comparative estimate of the four human values—*dharma*, *artha*, *kāma* and *mokṣa*—of which artha and kāma are generally considered to be only instrumental values, while the other two to be ultimate values. It is noteworthy here that the order in which these four *Puruṣārthas* are commonly mentioned is to be understood as having a special significance viz., the first two dharma and artha are the instrumental values—upāyas of the last two upeyas—dharma being the cause of mokṣa, the final puruṣārtha, and artha the cause of kāma and (2) the mentioning of artha and kāma after dharma suggests that all arthas and kāmas cannot be called puruṣārthas but only those which do not go against the rules of dharma and ethical codes. So it is even suggested that artha and kāma so acquired are even the causes of dharma, without which dharma cannot be accomplished.

"The message of Indian Philosophy" deals with the ideal life from the Indian standpoint—the life of unselfishness and self-renunciation having complete detachment or disinterestedness to do social service, etc. The two lectures on *The Quest after Perfection* contain an explanation of "The Inner meaning of human history". Man is considered to be the finest production of the greatest artist—God and his fineness and perfection consist in his pursuits of life aiming at the high ideals of *eternal truth, Sublime Beauty* and *Final Freedom.* Man's special quality is his gift of knowledge along with his sense of appreciation or criticism—Vijñāna. "Śaṅkara's conception of ultimate value" is only a reiteration of what has already been said in the "Indian conception of values along with the advaitic conception of *mokṣa* which is not *sāddhya*—a thing to be newly produced but—*siddha*—an accomplished reality." When the illusion—*avidyā*—is removed by the *vidyā* of Ātman or Brahman, *avidyā* and its effects are automatically removed. "A neglected way of life" and "philosophy of values" contain respectively a plea for the *Nivṛttimārga* already explained in "*the two-fold way of life*" and for the attainment of the final *puruṣārtha* elucidated in "the Indian conception of values".

From the foregoing account one can easily discern that these studies contain a lucid, clear and masterly elucidation of many philosophical topics which would no doubt interest every student of Indian philosophy. It is no exaggeration that such topical discussions, both analytical and argumentative, of a few of these difficult subjects cannot be found even in the popular advanced English treatises on Indian Philosophy. It must be observed that the most striking feature of PROF. HIRIYANNA's writings is that he does not say anything which is not supported by authority and this special feature has attracted many to read his writings with zeal and enthusiasm.

All students of Indian philosophy owe a deep debt of gratitude to the publishers of his writing and lectures in these two handy beautiful volumes, particularly to late PROF. HIRIYANNA's daughter who has taken abiding interest in publishing these in book-forms. The editorial work chiefly done by Prof. N. Sivarama SASTRI of the Department of Sanskrit in the University of Mysore deserves all praise. The Printers and Publishers—The Wesley Press and the Publishing House of Mysore—deserve our congratulation for having given their best to make these volumes very attractive. It is eagerly hoped that the companion volume on *Art-Experience* containing eleven essays (already advertised) will soon be published for the benefit of all the students of Sanskrit literature and literary criticism.

Poona. V. A. R. SASTRI.

Tamil Culture—A Quarterly Review dedicated to the study and diffusion of Tamiliana. Vol. I, No. 1. February, 1952. Edited and published by Xavier S. Thani NAYAGAM, M.A., M. Litt., S.T.D., Director, Tamil Literature Society, 52, New Colony, Tuticorin, South India. Rates of Subscription (Annual): India, Ceylon, Burma, Malaya, Rs. 5; U. K. 8sh.; U.S.A. 1.50.

Tamil Culture seeks to meet the long-felt need for a journal for spreading a knowledge of Dravidian culture through the medium of English. In his introduction, the Editor rightly observes that the English-educated Tamils having been bestowing little or no attention on their own language and literature and that, barring the work of a few scholars like P. T. Srinivasa IYENGAR, there have been no attempts by Indian scholars until now for interpreting to the outside world the treasures of what G. U. POPE, the English savant of Tamil, describes as "the very ancient, copious and refined Tamil language". Strangely enough, the attitude of the South Indian Universities in regard to Dravidian studies has been one of general indifference, but, even if the Universities shake off their present apathy and make a greater effort, there is need for private publications of the present type in the field of Dravidian. *Tamil Culture,* which is a contribution to Dravidian studies by an editor possessing missionary zeal, would undoubtedly meet with an eager welcome from all lovers of Indian culture.

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The Editor rightly points out in his introduction that the "function of the research scholar is not to act as a partisan but to be a witness to truth". Unfortunately in South India there is current to-day a lot of provincial and communal prejudices which are making themselves felt on literary and research work, taking away much from their worth. It is to be hoped that the present journal will not give quarter to partisan and unscientific views.

The articles in the first issue are not, however, of a high standard. It is a matter for regret that even a usually careful scholar like Prof. S. Vaiyapuri PILLAI makes certain surprisingly uninformed statements in his paper entitled "Recent Progress in Research Studies". For instance he refers to the late Professor L. V. Ramaswami AIYAR, that veteran Dravidian scholar, as a Malayalam scholar. He does not seem to recognize the fact that after the time of CALDWELL Prof. Ramaswami AIYAR's contributions alone have made some all-round advancement in the field of Dravidian scholarship. Again, he does not make any reference to the work of the Deccan College Research Institute in the field of Dravidian linguistics when he refers to Dr. G. S. GAI's work on Kannada, though Dr. GAI produced his work as a student of the Dravidian Department of the Deccan College Research Institute. One does not know whom Professor PILLAI means when he says: "The Dravidian languages, it is believed, give little scope for research". Surely it could not be scholars who believe so. But it must also be mentioned here that Prof. PILLAI has made some very important points while analysing the causes of our lack of progress in research studies in the field of Dravidian. For instance he makes a profoundly true statement when he says, "We have been systematically refusing to study Sanskrit and other languages and our equipment for research has been far from satisfactory."

It is very important to avoid giving publicity to inaccurate and hyperbolic statements in a journal of this type without appropriate editorial comments, if it is to command the respect of scholars. The present issue contains a few such statements, Professor V. R. Ramachandra DIKSHITAR's remarks on the character of Tamil published in the very valuable "News and Notes section being a good instance in point. Says Prof. DIKSHITAR: "Tamil, which seems to be the oldest language of the so-called Dravidian group of languages, grew independently of any other language including Sanskrit". Such remarks by a Professor of History are likely to be taken as truth by uncritical students of Tamil culture, and to give opportunities for the spread of wrong ideas like this is a distinct disservice to the progress of Tamil and Dravidian studies. It is to be hoped that *Tamil Culture* will render a genuine service to the world of scholarship by maintaining a high standard in its contents.

Pilani.

A. C. SEKHAR.

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